DISSERTATION

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GENDER DIFFERENCES IN DEPRESSION, ANXIETY, STRESS AND QUALITY OF LIFE AMONG PARAMEDICAL STUDENTS

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INDEX

S. NO.	PARTICULARS	PAGE NO.
1	INTRODUCTION	1-22
2	AIM AND OBJECTIVES	23
3	REVIEW OF LITERATURE	24-33
4	MATERIALS AND METHODS	34-38
5	RESULTS	39-52
6	DISCUSSION	53-58
7	CONCLUSION	59
8	BIBLIOGRAPHY	60-65
9	ANNEXURE	
10	ANNEXURE I – PRELIMINARY IDENTIFICATION DATA SHEET (ENGLISH)	
11	ANNEXURE II – PRELIMINARY IDENTIFICATION DATA SHEET (HINDI)	
12	ANNEXURE III – CONSENT FORM (ENGLISH)	
13	ANNEXURE IV – CONSENT FORM (HINDI)	
14	ANNEXURE V – GENERAL HEALTH QUESTIONNAIRE	
15	ANNEXURE VI – WHO QoL BREF 26 (ENGLISH VERSION)	
16	ANNEXURE VII – WHO QoL BREF 26 (HINDI VERSION)	
17	ANNEXURE VIII – DASS 42 (ENGLISH VERSION)	
18	ANNEXURE IX – DASS 42 (HINDI VERSION)	
19	LETTER OF ETHICAL CLEARANCE	
20	STATISTICIAN CERTIFICATE	
21	ANNEXURE X – MASTER CHART	

LIST OF TABLES

S. NO.	TITLE
1	Table 1 showing the total number and percentage of respondents
2	Table 2 showing the total number of respondents in terms of gender
3	Table 3 showing the institution from where data was collected
4	Table 4 showing the total number and percentage of respondents in terms of course
5	Table 5 showing the mean for the General Health Questionnaire
6	Table 6 showing the total number and percentage of respondents in terms of General Health Questionnaire
7	Table 7 showing the total number of respondents, mean and SD in terms of Depression, Anxiety, Stress Scale (DASS 42) and WHO Quality of Life (WHOQoL-26)
8	Table 8 showing the representation of T-test summary of psychological variables
9	Table 9 showing representation of depression severity by gender
10	Table 10 showing representation of anxiety severity by gender
11	Table 11 showing representation of stress severity by gender
12	Table 12 showing representation of quality of life severity by gender

LIST OF FIGURES

S. NO.	TITLE
1	Figure 1 showing the total number and percentage of respondents
2	Figure 2 showing the total number of respondents in terms of gender
3	Figure 3 showing the institution from where data was collected
4	Figure 4 showing the total number and percentage of respondents in terms of course
5	Figure 5 showing the mean for the General Health Questionnaire
6	Figure 6 showing the total number and percentage of respondents in terms of General Health Questionnaire
7	Figure 7 showing the total number of respondents, mean and SD in terms of Depression, Anxiety, Stress Scale (DASS 42) and WHO Quality of Life (WHOQoL-26)
8	Figure 8 showing the representation of T-test summary of psychological variables
9	Figure 9 showing representation of depression severity by gender
10	Figure 10 showing representation of anxiety severity by gender
11	Figure 11 showing representation of stress severity by gender
12	Figure 12 showing representation of quality of life severity by gender

LIST OF ABBREVIATIONS

S. NO.	ABBREVIATIONS	FULL WORD
1	GHQ	General Health Questionnaire
2	DASS 42	Depression, Anxiety, Stress Scale 42
3	WHO QoL BREF 26	World Health Organisation Quality of Life BREF 26

INTRODUCTION

INTRODUCTION

The health of all people is fundamental to attain peace and security of individuals and states. Attaining a good health is one of the fundamental rights of all humans without any distinction of race, religion and political belief, economic or social conditions. Health, according to the World Health Organization (1948), is a condition of whole physical, mental, and social well-being rather than only the absence of illness or disability. Health is "a resource for everyday life, not the objective of living," according to the World Health Organization's 1986 explanations. Since health is a positive notion that emphasizes both physical and social resources, it is not an end in and of itself but rather a tool to support an individual's role in larger society[1.] As per the most recent World Bank/World Health Organization report, there has been a concerning halt in the advancement of universal access to high-quality, reasonably priced healthcare. Over half of the world's population still lacks access to basic health care, and 2 billion people face severe financial hardship when paying out of pocket for essential services and goods[2].A healthy lifestyle gives you the ability to live a full life with meaning and purpose. The world's population and economy are growing, science and technology are developing, and the world is becoming more interconnected. These factors have led to tremendous societal changes and unprecedented advancements, but they have also created a number of complicated issues that have an impact on the health of billions of people worldwide. India is the second most populous country in the world, and in recent years, the world has taken notice of its changing socio-political-demographic and morbidity trends[3.]

The government has implemented a number of growth-oriented measures, but the health sector is facing difficulties as a result of growing regional, economic, and gender inequities. Historically, the Indian healthcare system has prioritized medical care delivery over public health. India's first National Health Policy (NHP) was established in 1983 with the intention of creating a system that included primary-care facilities and a referral system. The 2002 revision of the NHP placed a strong emphasis on expanding the system's reach and usefulness while also integrating public and private clinics into the healthcare industry. Ensuring that all residents have adequate access to curative care without encountering financial restraints is the aim of India's recent governmental focus on universal health coverage. Both the identification of socioeconomic determinants of health as a major predictor of population health and the requirement for a public health cadre inside the current healthcare system are equally relevant. The goal of India's recent government emphasis on universal health coverage is to guarantee that all citizens have sufficient access to curative care without facing budgetary constraints. The need for a public health cadre inside the current healthcare system is just as pertinent as the discovery that socioeconomic determinants of health are a significant predictor of population health. Due to these disadvantages, those with higher incomes are more likely to use the private healthcare system, which is less affordable for low-income families. This leads to unequal access to healthcare, and physicians are hesitant to work in remote areas. Both human resources and infrastructure in India are inadequate. Despite advancements in a number of health metrics, India bears a disproportionate share of the world's disease burden. India's neighbours in the region and other middle-income countries have better health indicators than we do. A sizable portion of the populace suffers from the consequences of poor care and falls into poverty as a result of high out-of-pocket medical costs[4].

Healthy mental health allows people to learn and work effectively, deal with life's obstacles, reach their full potential, and contribute to their communities or other workplaces. Being well and well is crucial for fostering our capacity to make choices, form bonds with others, and influence the world on a personal and societal level. The phrase "state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" is used by the World Health Organization (WHO) to characterize mental health[5]. A fundamental human right, mental health is essential for social, economic, and individual growth. Mental wellness encompasses more than just the absence of mental illnesses. Each person experiences it in a unique way along a complex continuum, with varying degrees of discomfort and difficulty as well as potentially very diverse social and therapeutic outcomes. Everyone can be impacted by a mental health problem. Mental health problems can result from a variety of factors. Numerous things, such as stress, life events, prior experiences, and genetics, have an impact on our mental health. Mental health encompasses our social, psychological, and emotional well-being. It affects our feelings, ideas, and actions. It also affects our ability to handle stress, communicate with people, and make sensible choices. Mental health is essential at every stage of life, from infancy and adolescence to adulthood. A significant global concern is mental health, and if we look at the field's advancements, they seem to be happening slowly. In 1954, Dr. Brock Chisholm, the first Director-General of the World Health Organization (WHO), made the astute observation that "there can be no true physical health without mental health." The situation hasn't changed much in almost 60 years. Neuropsychiatric disorders account for almost 14% of all diseases globally[6].

SCENARIO OF MEDICAL SCIENCES IN INDIA

India's commitment to universal healthcare depends on having a sufficient and effective health workforce that offers basic, secondary, and tertiary care in the public and private sectors across the country. It takes coordinated efforts to guarantee the fair distribution and availability of healthcare personnel in order to provide access to high-quality care in every part of rural India. The Indian medical education system is constantly changing and aiming to meet global norms. The COVID-19 epidemic has presented a chance to change the current state of medical education. It provides an opportunity to adopt and incorporate more modern learning methods, such as flexible online learning and telehealth[9]. However, many medical colleges still struggle with inadequate infrastructure, equipment, and faculty shortages, impacting the quality of education and training. There have been efforts to modernize the medical curriculum, including introducing more competency-based and patient-centric approaches. However, the pace of reform has been gradual. Retaining and deploying medical graduates, especially specialists, in rural and underserved areas remains a persistent challenge for the healthcare system[12]. Overall, the current scenario of medical sciences and education system in India is grappling with the dual goals of expanding access and improving quality, which requires continued policy focus and systemic reforms. India has made strides in improving its health, but its full potential has not yet been realized. That will be aided by changes to the nation's health systems, and there is increasing debate on the specific technical changes required for both public and curative health.

However, much more policy focus is required to fully understand India's diverse, heterogeneous health system and how it may be better integrated to deliver more efficient services that result in better outcomes. Better integration and shared stewardship are needed, yet the public and private delivery systems are still analyzed and discussed independently[10]. Beyond the administrative and technological facets of the health delivery system, governance and accountability concerns—especially under India's federal structure—are important for efficient health care just as they are for the execution of other social policies. Enhancing returns on investment and increasing health outcomes will probably be made possible by paying much more attention to responsibilities and financial autonomy at all levels of governance. The necessity to put mental health first is highlighted by the intense academic environment, as well as the difficulties of social connections and personal development[11]. Numerous variables, such as peer pressure, bullying, family issues, toxic relationships, lack of sleep, poor diet, and inactivity, can contribute to students' poor mental health. Most of the time, students are overworked and overburdened with assignments and homework. The tension this causes will surely have a negative impact on their mental health. However, some pupils have a tendency to be fiercely competitive and occasionally aim to surpass all others. As a result, they would feel under pressure to perform well academically, even if it meant sacrificing their friends or skipping the assignment. Because of their elevated stress levels, these kids frequently experience sadness[12]. Concern over schoolchildren's mental health is on the rise. For many young individuals, the responsibilities of schooling coupled with the difficulties of puberty might spell doom. Mental health problems can negatively affect students' connections with friends and family as well as their quality of life, academic achievement, physical health, and contentment with their college experience.

For students, these problems may also have long-term effects on their general health, earning potential, and future career. Mental health problems can have a detrimental effect on a student's energy, focus, dependability, mental capacity, and optimism, all of which can affect performance. Research indicates that depression is associated with lower grade point averages, and that this association may be exacerbated if anxiety and depression co-occur. Depression has also been linked to school dropout. Many college students assert that mental health problems impair their ability to function academically[13]. The 2015 American College Health Association survey found that a number of mental health illnesses, including stress (30%), anxiety (22%), sleep issues (20%), and depression (14%), negatively impacted college students' academic performance during the course of the preceding 12 months[14]. For better or worse, a student's overall quality of life is influenced by their mental health. When a student is in good mental health, their connections with others, their physical health, and their perception of themselves all tend to improve. They are more open to learning, adapting, and expressing themselves. Regretfully, a lot of students struggle to understand that they don't have to endure the symptoms of a mental health issue alone, as well as to distinguish between a poor day and ongoing stress. Academic performance is impacted by a student's mental health. For instance, persistent stress can cause burnout and difficulty focusing, which lowers a student's academic productivity. As students advance through their academic career, symptoms of a mental illness may affect not only their grades but also their education. Given the sedentary, tech-dominated lifestyle we today lead, prioritizing fitness is crucial. By forming healthy behaviours at a young age, students create the foundation for a healthier future. Students who are physically active also have more energy and stronger immune systems, which helps them cope with the demands of a rigorous academic schedule.

Mental health and physical fitness are closely related. Participating in regular physical activity helps students feel happier, manage their mental health, and have more self-confidence. It also promotes healthy sleeping practices, which improve concentration, memory, and cognition. Mentally healthy students are ready to learn. They are more likely to be driven to meet their academic objectives and to have greater self-esteem. It might be challenging for students to concentrate, remember, and solve tasks if they are struggling with mental health concerns or have been diagnosed with a mental health illness. Additionally, they could find it difficult to meet expectations in the classroom. Attendance and even graduation rates are impacted by a student's mental health[15]. According to a 2021 survey, nearly one-third (29%) of students had poor mental health, and over four out of ten (42%) felt depressed or gloomy all the time. Additionally, 1 in 10 (10%) students tried suicide, and more than 1 in 5 (22%) students gave suicide considerable thought. The degree of distress that many students are going through is highlighted by these statistics. Students of all racial and ethnic backgrounds, female students, and LGBQ+ students were shown to experience these distressing emotions more frequently. Compared to heterosexual students, over half (45%) of LGBQ+ students in 2021 seriously pondered contemplating suicide. The mental health of students is deteriorating by almost all measures[16]. More than 60% of college students met the threshold for at least one mental health concern during the 2020–2021 academic year, according to the Healthy Minds Study, which collects data from 373 schools nationwide. Mental health problems can result from a variety of factors. Numerous things, such as stress, life events, prior experiences, and heredity, have an impact on our mental health. Despite India's renowned academic excellence and rich cultural heritage, mental health problems among students there are a silent tragedy that often goes undetected. In India's educational system, where academic achievement is highly valued, students' emotional health is commonly neglected and ignored.

For a multitude of factors, the number of students experiencing mental health issues has skyrocketed in recent years. Students' mental health is negatively impacted by the atmosphere created by the pressure to perform well academically as well as the high expectations of parents and society. The fierce competition for a small number of possibilities causes students to become anxious, angry, and unhappy. Lack of knowledge and understanding about mental health issues exacerbates the problem. Many students suffer in silence and are afraid to seek help because mental health problems are stigmatized. As a result, they often fail to disclose their problems, which has a lasting impact on their overall health. Students are experiencing untreated mental health difficulties as a result, which can have detrimental effects. Students may perform lower academically if they have trouble focusing and handling the demands of their studies. The stress and poor performance that could arise from this condition could cause their mental health to worsen even more. Furthermore, a student's capacity to lead a satisfying life on both a personal and professional level may be negatively impacted in the long run by untreated mental health conditions. It might hinder their ability to form enduring relationships, make it more difficult for them to find employment, or, in the worst cases, lead to substance abuse or self-harm[17].

GENDER DIFFERENCES IN MENTAL HEALTH PROBLEMS AMONG HEALTHCARE PROFESSIONALS

It is well known that stress, anxiety, and depression are prevalent among students in both developed and developing countries. Mental health is one of the most significant determinants of life satisfaction and quality. Poor mental health is a complex and common psychological problem among students. Over the past few decades, numerous psychological and psychiatric studies conducted in both developed and developing countries have shown that university students are more prone than the general population to experience stress, anxiety, and depression (SAD). It is well known that stress, anxiety, and depression are complex issues that can directly impact and be influenced by a person's quality of life. These issues can result in personal, health, social, and professional issues. Untreated mental health problems, which can include, but are not limited to, impaired academic integrity, substance and alcohol misuse, a lack of empathy, unstable relationships, low self-esteem, and suicidal thoughts, can negatively impact students' quality of life and academic performance. Poor hygiene, a lack of passion and interest, inattention, trouble sleeping, and appetite loss are some common overt indicators of stress, anxiety, and depression, however these conditions can take many various forms.. Students are more likely to experience anxiety and depression if they have low self-esteem. Furthermore, students who score highly on neuroticism and low on extraversion on the five-factor personality inventory are more likely to suffer from stress, anxiety, and depression while attending college[18, 19]. Elevated risk factors for stress, anxiety, and depression are significantly influenced by other psychological factors, including loneliness. Until they adjust to university life and form a social circle, new students may experience challenges like loneliness when they move away from home and begin an independent life.

Students who live outside of their hometown for academic purposes are more prone to experience anxiety and sadness, as demonstrated by Kawase et al. Certain students arrive to college with pre-existing mental health issues, which may worsen as they adjust to living alone. Students who have previously battled mental health conditions like PTSD are more likely to feel anxiety and sadness while attending school than those who have not, even though depression is more prevalent among college and university students than in the general population[20]. Additionally, stress, anxiety, and depression later in life and at university are correlated with childhood exposure to violence, whether in the home or in the community. Epidemiological surveys show that externalizing and drug use disorders are substantially more prevalent in men than in women, and anxiety and mood disorders are far more prevalent in women than in men. According to the latter, gender disparities in the prevalence of mental disorders are caused by the common stressors, coping strategies, and opportunity structures for expressing psychological distress that are made differently available to men and women in different countries at different periods in history[21]. Everyone is impacted by mental illness. However, the way that mental illnesses are experienced varies from person to person. Researchers are increasingly attempting to determine the causes of disparities and the implications of those discrepancies for outcomes and treatment[22]. According to R. Kathryn McHugh, PhD, of McLean, "sex, gender, and age differences have historically been grossly understudied in health in general."[56] Christine Kuehner has reviewed the gender disparity in depression. Sex hormones, women's blunted hypothalamic-pituitary-adrenal axis response to stress, women's and girls' increased inclination for body shame and rumination and low self-esteem, higher rates of interpersonal stressors, childhood sexual abuse, and, on a societal level, discrimination and lack of gender equality are some of the potential risk factors she cites[23].

Overall, it appears startling that women are more likely to experience several of the well-known risk factors for depression, which may be a contributing factor to their greater occurrence of depression. The frequency of problems linked to stress, anxiety, and trauma varies similarly by gender. Li and associates attempted to explain this discrepancy in their review, concentrating on the possible contribution of the sex hormones progesterone and oestradiol. In order to explain the gender gap in these disorders, they suggested that women may be more susceptible due to their higher monthly and life-span fluctuations of these hormones, which clearly cannot only alter neurotransmitters and neurosteroids but also affect cognitive and behavioural processes[24].

Gender difference in depression: Deprimere, which meaning "to press down" in Latin, is where the word "depression" originated. It produces intense symptoms that impact a person's feelings, thoughts, and ability to perform daily tasks including eating, sleeping, and working. People of all ages, races, nationalities, and genders are susceptible to depression. Depression, according to the World Health Organization, is a common mental condition that can impact everyone. It is characterized by a chronically low mood, diminished enjoyment, or a lack of enthusiasm in activities. This is not the same as typical mood swings and feelings about daily life. Depressive episodes last for the majority of the day, nearly every day, for at least two weeks. Those who are depressed frequently experience changes in eating and sleep patterns. They could have low self-esteem, thoughts of mortality, and hopelessness about the future. Additionally common are fatigue and difficulty concentrating. Women are diagnosed with depression more often than males, despite the fact that men can also suffer from it. Because men may be less inclined to recognize, talk about, and seek help for their emotions or emotional problems, they are more likely to have their depression symptoms go untreated or receive insufficient treatment.

Researchers have long known that women are about twice as likely as males to be diagnosed with depression, and that the illness is the main cause of disease burden among women. But the differences don't end there. Depression in men also shows up in distinct ways. According to Andrew Angelino, M.D., Chair of Psychiatry at Howard County General Hospital, "women with depression may come in crying, and men may come in acting out in anger." "We've taught boys that they don't cry, so instead of crying, they get angry and threatening." Men and women also handle depression in different ways, with women more likely to seek treatment. Men are four times more likely than women to commit suicide, accounting for nearly eight out of 10 suicides in this country. However, women are far more likely to have suicidal thoughts than men. The higher suicide incidence among men is partly due to the fact that women are more prone to choose less immediately lethal techniques, including poisoning, whereas men are more likely to use firearms. Depression is more common in women than in males. Women may be more likely to experience depression because of unique biological, life cycle, hormonal, and psychological aspects. It has been shown that hormones directly affect the chemistry of the brain that controls mood and emotions. Depression can affect men and women differently, and they may also respond differently to its symptoms. Men are more likely to confess to fatigue, irritation, lack of interest in once-pleasurable hobbies, and sleep issues, whereas women are more likely to confess to feelings of sorrow, worthlessness, and/or excessive guilt. Men are more likely than women to turn to alcohol or smokes when they feel depressed, frustrated, discouraged, irritable, angry, and sometimes abused. To avoid talking to friends or family about their sadness or to act carelessly and dangerously, some men lose themselves in their profession[25, 26].

Gender difference in anxiety: According to the DSM-5, anxiety is the expectation of a threat in the future; it is not to be confused with fear, which is the emotional reaction to an actual or perceived impending threat. The Latin noun angor and its accompanying verb ango (to restrict) are the roots of the English word anxiety. Angustus (narrow) is a cognate word. Angst in modern German (and cognate words in Dutch, Danish, Norwegian, and Swedish) is derived from an Indo-European origin. Anxiety is a common feeling. From an evolutionary perspective, it is adaptive because it encourages people to avoid dangerous circumstances, which helps them survive. The American Psychological Association states that tension, concerned thoughts, and physical symptoms like elevated blood pressure are all signs of anxiety**.** Although women are more likely than males to experience anxiety, men can also be impacted by it, according to numerous studies. Students studying paramedicine face many obstacles, some of which could endanger their health. Studies conducted over the past 20 years have shown that paramedics and paramedical students are more prone than the general population to suffer from mental illnesses. These results imply that elements associated to the course may have a significant role in causing mental health issues. Research also showed that a number of difficulties faced in clinical training or at school have an impact on paramedic students' mental health. Although there are many variables that influence students' psychological health, the detrimental effects of the difficulties they encounter can be avoided. Experts examined the gender disparities in anxiety disorders and published their findings in the Journal of Psychiatric Research. In order to better understand how HIV impacts men and women differently, the authors recognized that women experience a greater incidence rate.

While women who have been diagnosed with one anxiety disorder are more likely to also have bulimia nervosa, major depressive disorder, and/or another anxiety disorder, men are more likely to have intermittent explosive disorder, attention deficit/hyperactivity disorder (ADHD), and substance addiction disorders. Experts noted a noteworthy interplay between race and gender specific to bulimia nervosa sufferers, as anxious Hispanic men were more likely to receive a diagnosis (3.6 percent) than Hispanic women (2.1 percent). It was found that the burden of illness is greater for women with anxiety disorders than for males, particularly for white and Hispanic women. This implies that the likelihood of disability is higher among women who suffer from anxiety disorders. Women tend to employ agoraphobic avoidance as a coping strategy for their anxiety, whilst men are more likely to abuse medications[27].

Gender difference in stress: The term "stress" was first used in 1936 by endocrinologist Hans Selye to characterize physiological responses in laboratory animals. Originating from the Latin word "Stringere," which means "to tighten," the term "stress." Stress is the outward expression of our "Fight or Flight" survival mechanism. "The nonspecific response of the body to any demand," as Hans Selye put it in 1956, is stress. According to Richard S. Lazarus (1966), "stress occurs when an individual perceives that the demands of an external situation are beyond his or her perceived ability to cope with them." According to Baum A. (1990), stress is "any uncomfortable emotional experience accompanied by predictable biochemical, physiological, and behavioural changes". Stewart, A.C., Roy, E.J., Penner, L.A., and Bernstein, D.A. (2008) state that "stress is viewed as a negative emotional, cognitive, behavioural, and physiological process that occurs as a person tries to adjust to or deal with stressors." Therefore, stress is a state of tension, conflict, and irritation that can be detrimental to one's physical and emotional well-being.

A state of strain (mental, physical, or both) that results in pain and emotional loss is referred to as stress by the dictionary of psychology (Lai, Chao, Chanf, & Chang, 1996). An examination of previous studies on stress-related factors indicates that gender has a substantial role in determining stress responses. Specifically, several studies have demonstrated that women tend to report higher levels of chronic stress and physical symptoms than men, even when they are exposed to the same stressors. Among the stress-related issues that female students identified were exam pressure, depression, and low self-esteem. Additionally, it was shown that compared to their male colleagues, female students had higher levels of overall and academic stress. When it comes to stress management, the psychological differences between men and women may be very apparent. This is not only anecdotal, as numerous studies have shown that gender has a substantial impact on stress reactions. Men typically have a "fight or flight" reaction and are more direct and aggressive. When under stress, they are more likely to act, possibly ignoring the emotional fallout until it becomes too much to bear. Women, on the other hand, usually choose for a "tend and befriend" strategy, which stresses the formation of relationships and the disclosure of private matters in an effort to lessen stress. It is connected to biological impacts as well as social conditioning[28].

Gender difference in quality of life: Quantifying a population's or an individual's well-being in relation to both the positive and negative aspects of their entire existence at a specific point in time is the goal of the concept of quality of life, or QoL. Common components of quality of life (QoL) include relationships, education, employment, money, freedom, and autonomy in decision-making, social belonging, physical surroundings, and personal health (physical, mental, and spiritual).

The World Health Organization defines quality of life as "a subjective evaluation of one's perception of their reality relative to their goals as observed through the lens of their culture and value system"[29]. The Quality of Life Research Unit at the University of Toronto defines QoL as the extent to which a person is able to recognize the value of the opportunities in their existence. The distinction between quality of life (QoL) and other very similar concepts—such as standard of living and health-related QoL—that are occasionally confused in the literature is vital. In contrast to the former, one's financial situation and financial status largely impact their quality of life. Even while children want to perform well in school, they may run into situations and events that cause these psychological issues while pursuing these goals. Students are required to balance their academic commitments with their personal lives, jobs, and extracurricular activities. If students are unable to plan and complete their work in the allocated time, they may experience increased psychological challenges and feelings of overwhelm. They may be trying to impress others by living up to expectations. The high strain of conflicting job expectations and the rapid changes in their environment are believed to have contributed to relatively greater levels of stress, anxiety, and depression among paramedical students. Medical education is competitive worldwide. Long medical and paramedical training, as well as exposure to clinical settings, might lead to mental health issues. Paramedical students may have a lower quality of life as a result of all of these issues, and little study has been done on the connection between stress, anxiety, and depression and quality of life. The purpose of this study was to ascertain how these characteristics and quality of life are related[29].

THE GLOBAL AND INDIAN PREVALENCE OF MENTAL HEALTH ISSUES

Common problems like anxiety and depression, those brought on by alcohol and other substance addiction, and severe and incapacitating conditions like schizophrenia and bipolar disorder are all considered mental disorders. Because of their great frequency and the associated difficulties, mental health issues in children and adolescents are concerning. For those with untreated mental illnesses, suicide is a severe but not unusual consequence. Along with these mental health issues, the WHO has designated dementia and epilepsy as priorities. These neurological ailments share characteristics with mental disorders in terms of the services they provide. An estimated 13% of the worldwide burden of disease is caused by untreated mental illnesses. At 4.3% of the worldwide disease burden, unipolar depression disorder ranks as the third most common cause of illness. 3.2% and 5.1% are the estimates for low- and middle-income nations, respectively. According to current projections, depression will be the primary source of disease burden worldwide by 2030. When calculating the burden of disease based only on the disability component, mental diseases account for 25.3% and 33.5% of all years lived with a disability in low- and middle-income countries, respectively. Being exposed to a humanitarian catastrophe is one of the biggest risk factors for mental health problems. Social institutions, existing official and informal services, and the care of individuals with severe, pre-existing mental issues are all affected. Surveys of those affected by conflict show that the prevalence of PTSD and depression are 15% and 17%, respectively. Compared to the typical prevalence rates in the general population, these figures are significantly higher. The availability of mental health therapy and the demand for it are significantly out of sync worldwide.

For example, between 76% and 85% of individuals with severe mental health issues in low- and middle-income countries do not receive treatment for their condition; in high-income countries, the same range is similarly noteworthy, ranging from 35% to 50%. People with mental problems have a high fatality rate. People with schizophrenia and major depression, for example, have an overall increased risk of mortality that is 1.6 and 1.4 times higher than that of the general population, respectively, because mental disorders are associated with serious outcomes like suicide and physical health issues like diabetes, cancer, and HIV infection. There are many different social and economic impacts of mental impairment. People who suffer from mental health illnesses often lack access to educational and income-generating opportunities, which limits their economic growth potential and deprives them of social networks and community status. For example, among all disabilities, severe mental illness is associated with the highest unemployment rates, up to 90%. People with mental health conditions often have their human rights violated. Along with restrictions on their employment and educational opportunities, they may also experience filthy and cruel living conditions, physical and sexual abuse, neglect, and degrading medical procedures. They are routinely denied the right to vote, citizenship, civil and political rights (such as the capacity to marry and have children), and the opportunity to participate completely and effectively in public life. There are insufficient financial and personnel resources available in countries to address mental health issues, according to data from WHO's 2011 Mental Health Atlas. It also highlights the unequal and wasteful usage of these resources. For instance, 67% of global financial resources designated for mental health are still spent on mental hospitals, despite the fact that they are associated with subpar health outcomes and human rights abuses. If these funds were directed toward community-based services, more individuals would have access to better and more reasonably priced healthcare[30, 31].

Despite the fact that mental health is a global concern, there are notable variations in the standard of care that is offered in every country, and cultural factors may occasionally be involved. It is well known that between 70 and 92 percent of issues go untreated, and one in seven Indians suffer from a mental illness. In December 2017, President Ram Nath Kovind warned of a potential "mental health epidemic" in India, where 10% of the 1.3 billion people live with one or more mental health conditions[32]. According to the WHO, India accounts for around 15% of the global burden of mental, neurological, and drug addiction diseases. In India, the proportion of people who need medical care but do not obtain it varies from 70 to 92 percent, depending on the state. It is estimated that approximately one-third of patients may be suffering from depressive symptoms. However, people are unable to get the help they need because of social stigma, a lack of facilities and resources, and a lack of awareness about mental health issues. There are only 5,000 psychiatrists (0.3 per 100,000) and less than 2,000 clinical psychologists (0.07 per 100,000) in India. Western countries have an average of 6.6 psychiatrists per 100,000 people and 0.04 mental hospitals per 100,000 people, compared to 0.004 mental hospitals per 100,000 people in India. Furthermore, because mental health services are so difficult to acquire, up to 40% of patients had to travel more than 10 kilometers to receive the first one offered at the district headquarters[33]. The Centre for Asian Philanthropy India (CAPI) conducted semi-structured interviews with 43 donors, non-profit executives, and experts from 31 mental health-promoting organizations. The insights gained from these discussions are detailed in a report titled Mindful Investments: Philanthropy for Mental Health in India. The article discusses key approaches to mental health in Indian philanthropy, challenges in the funding landscape, and opportunities and recommendations to help donors better address India's mental health needs [34].

Disparities in mental health, the way that people seek medical attention, and the reactions of the medical community and society at large are all influenced by socially created distinctions between men and women in terms of roles and responsibilities, status, and power. The use of mental health services differs by gender. Compared to women, men are less likely to consult mental health specialists. In general care, gender differences in care are more noticeable, but in residential or specialized care, they become less noticeable. This disparity in men's and women's utilization of mental health services cannot be explained by a lack of need. Men and women have different symptoms, although the overall prevalence of psychopathology is the same for both sexes. Internalizing disorders are more common in women than externalizing disorders, which are more common in men [35]. Very few of the many theories that have been put up to explain gender differences have been objectively tested. Men are more likely than women to experience substance use problems and antisocial behaviours as they become older, while women are far more likely to experience anxiety and sadness. Additionally, women are more likely than men to suffer from anxiety and depression due to biological and genetic causes. Mood swings have been linked in some studies to hormonal changes during the menstrual cycle. Hormonal and psychological factors interact to increase the risk of depression during pregnancy and after delivery. Women may experience significant psychological anguish and challenges as a result of reproductive health issues. Women who experience infertility or hysterectomy are more likely to develop affective or neurotic problems[36]. A recent U.S. study found that persons with bladder control problems—a condition that affects older women more often than older men—exhibited higher levels of mental anguish and depressive symptoms. Cultural beliefs of being a female and male and not of psychological traits, determine how men and women think and behave.

People have similar ideas about what behaviour is suitable for men and women, and they are always trying to create the impression that gender differences exist during social encounters. The way that people with mental health illnesses view their level of discomfort and seek medical help varies. Several studies in the United States found that women experienced greater degrees of distress than males and were more likely to think they had an emotional illness than men who experienced the same symptoms. Taking care of oneself, asking for help, and expressing feelings are all portrayed as feminine traits. Men are expected to be emotionally stable and to be strong, independent, and self-sufficient. Men are therefore encouraged to identify as different from women by concealing their own health problems and refusing to seek treatment in order to conform to the socially prescribed masculine role. Men may be reluctant to seek professional assistance due to this gendered role conflict because they fear additional stigma. Males are more likely than females to choose to treat mental illness on their own. When men choose to seek professional help, they usually desire a quick and easy solution. Therefore, they seek medical care more often than women do, instead of psychotherapy [37].

Beyond merely recording sex variations in the prevalence of mental and neurological disorders, study is essential. It is necessary to investigate how gender differences affect men's and women's risk and susceptibility, access to medical care, and the social and economic ramifications of mental illness across a range of settings, social groupings, and life stages. Finding evidence that helps coping with distress easier should be the focus of more research; the findings should be used to educate the public about these distinctions, especially at the community and primary care levels[38].

It is critical to research beyond documenting sex differences in mental and neurological disease rates. In different settings and social groupings, and at different times in the life cycle, it is necessary to investigate how gender differences influence women's and men's risk and susceptibility, their access to health treatments, and the social and economic repercussions of mental illness. Additional research should be given more attention to finding evidence that makes it easier to deal with distress; the results should be used to teach these differences to the public, particularly at the community and primary care levels.

AIM AND OBJECTIVES

AIM AND OBJECTIVES

Aim: To study the gender differences in depression, anxiety, stress and quality of life among paramedical students.

Objectives:

- To evaluate the differences in depression, anxiety, stress and quality of life between males and females paramedical students.
- To study the relationship of depression, anxiety, stress with quality of life between males paramedical students.
- To study the relationship of depression, anxiety, stress with quality of life between females paramedical students.

REVIEW OF LITERATURE

REVIEW OF LITERATURE

Mental health is a crucial aspect of overall well-being, especially for paramedical students who often face high levels of academic pressure, demanding clinical responsibilities, and emotional strain from patient care. These stressors can negatively affect their mental health, leading to anxiety, stress and depression leading to a poor quality of life. Paramedical students often face rigorous academic workloads and challenging practical training. Balancing studies with clinical duties can lead to significant stress. Studies suggest that the combination of academic pressure and the need to perform in high-stakes clinical environments exacerbates anxiety and stress levels. Frequent exposure to trauma, critical illnesses, and patient suffering in clinical settings can emotionally overwhelm paramedical students. This exposure often leads to compassion fatigue, which, over time, can manifest as emotional exhaustion or detachment from the work, affecting both professional performance and personal well-being. The review of literature is dated from the year 2010 to 2024.

The literature has been outlined as follows:

1. **Depression and gender differences among paramedical students.**
2. **Anxiety and gender differences among paramedical students.**
3. **Stress and gender difference among paramedical students.**
4. **Quality of life and gender difference among paramedical students.**

Given these challenges, it is essential for institutions to provide mental health support for paramedical students. Implementing stress management programs, access to counselling services, and promoting a healthy work-life balance can help mitigate the mental health challenges faced by these students.

Depression and gender differences among paramedical students.

1. In a study conducted by **Suresh, A., et.al (2023)**, the number females were enrolled as study sample were more as compared to males. It was a cross-sectional study conducted among the 208 paramedical students pursuing Bachelor of Science in Medical Laboratory Technology (BSc MLT), Diploma in Operation theatre and Anaesthesia technology (DOTAT), Diploma in Cardiovascular technology (DCVT), and Diploma in Medical Laboratory Technology (DMLT) courses. They have used Beck's depression inventory tool to identify the severity of depression and found that the prevalence of depression was 24.5%, further 11.54%, 10.58%, 1.92% and 0.48 % had borderline, moderate, severe, and extreme form of depression respectively. 78% of the sample were females with depression (40) and 22% were males with depression (11)[38].

2. A study conducted by **Al-Muhanna et al. (2020)** explored depression rates among medical and paramedical students in Saudi Arabia and found that female students exhibited higher levels of depressive symptoms compared to their male counterparts. Factors contributing to this disparity include greater academic stress and higher sensitivity to environmental pressures among female students. The study suggests that female paramedical students may experience more societal expectations, leading to increased vulnerability to depression, especially during high-stakes periods like exams. 6205 paramedics (reported in 25 cross-sectional studies) were meta-analysed after searching seven electronic databases and depression was lower during the pandemic compared to the pre-pandemic period [25% vs. 39%][39].

3. A cross-sectional study was conducted by **Madan Kumar S and Archana R (2010)** on the first- and second-year students of 18-22 years of age after obtaining informed consent and Institutional ethical clearance. DASS questionnaire was used to assess the depression, anxiety and stress levels in the Allied health sciences students and to find out the existence of difference of scores in the male and female students. In the present study, a significantly high percentage of male students had higher scores in depression, anxiety and stress compared to the female students. Moderate depression in 32.56% males; 27.87% females, severe depression in 30.23% males; 18.85% females, extremely severe depression in 18.6% males and 1.64% females were observed[40].

4. A cross-sectional study was conducted by **Gitay, N., et. al. (2018)** at Health University of Karachi, Pakistan to assess and compare the mental health of male and female healthcare students for which questionnaire was designed along the standard scoring scales of depression (PHQ-9), anxiety (GAD-7) and phobia (IAPT) which was completed by 300 enrolled students. Females (52%) of the medical institute suffered from mild to moderately-severe depression in contrast to the males (33%) [41].

5. A cross-sectional study was conducted by **Azizi, S., et.al. (2015)** in students of paramedic sciences, Mazandaran University of medical sciences in which out of 1500 students, 200 participants were randomly selected and Beck's Depression Inventory was used to assess the level of depression among the participants. Results showed that females had higher levels of depression as compared to males.

Results also showed that students of Sciences Laboratory has higher depression as compared to students of the Operating Room. Approximately, 18% has moderate depression, 4% had severe depression and 8% had borderline clinical depression overall[42].

Anxiety and gender differences among paramedical students.

1. A cross-sectional study was conducted by **Raja, S., et.al. (2022)** among paramedical and medical students at a private medical college hospital and research centre in South India. After obtaining informed consent, the data was collected using an email questionnaire and standard data collection tools such as the Perceived Stress Scale (PSS); and the Depression, Anxiety and Stress Scale - 21 (DASS-21) questionnaire were used. Out of 1200 students, 1015 (85%) responded to the email questionnaire. The prevalence of anxiety among the study participants was 43%. Overall, 2% reported extremely severe anxiety. Prevalence was higher among females (44%) than males (39%) [43].

2. The study conducted by **Marczewski, K.P., et. al. (2022)** involved 387 paramedics working Medical Rescue Teams in Poland. The majority of respondents were male (72.35%). In order to achieve the aim of the study, an online diagnostic survey was conducted using a questionnaire of the author's own design and standardized questionnaires: Hospital Anxiety and Depression Scale (HADS) and General Anxiety Disorders (GAD-7). Significantly, higher values were observed for all analysed scales in females compared to males. The main factors influencing the occurrence of anxiety and depression symptoms were gender, seniority at work, family relations, use of sleeping pills.

Among 387 employees of Emergency Medical Teams, as many as 25.4% of males and 47.7% of females scored 11–15 points on the GAD-7 scale, which indicates severe generalized anxiety[44].

3. A cross-sectional study by **Asayesh, H., et. al. (2015)** in which 233 paramedical students of Qom University that had been randomly selected were participated in this study. The demographic information's sheet, test anxiety inventory and the self-efficacy scale were used as data collection tools. Logistic regression analysis and Pearson correlation coefficient were used for data analysis. The score of test anxiety of 43.4% of the students was more than the mean of anxiety score. In the univariate logistic regression analysis, the increasing of self-efficacy score was associated with the decreasing of the test anxiety. (OR: 0.79, 95% CI: 0.73-0.86) And also, the chance of test anxiety among the female students was more than males. (OR: 1.74, 95% CI: 1.01-2.99)[45].

Stress and gender difference among paramedical students.

1. A cross-sectional study was conducted by **Raja, S., et.al. (2022)** among paramedical and medical students at a private medical college hospital and research centre in South India. After obtaining informed consent, the data was collected using an email questionnaire and standard data collection tools such as the Perceived Stress Scale (PSS); and the Depression, Anxiety and Stress Scale - 21 (DASS-21) questionnaire were used. Out of 1200 students, 1015 (85%) responded to the email questionnaire. Prevalence of stress was slightly higher among females (12%) than males (9%) [43].

2. A cross-sectional study was conducted by **Chaudhary, S., et. al. (2022)** from a Private Health Sciences University in Northern India. The study was conducted on total 354 students of 18-22 years in which 154 paramedical students were included. Severe stress was mentioned by 21.7% females and 8.5% males; moderate stress was reported by 16.6% females and 8.5% males; and mild stress was reported by 14.9% females and 7.14% males. Ragab., et. al. showed main sources of stress were time pressure, heavy workload, fear of failure, and examination frequency. One-third of students indicated that they experienced at least one source of psychosocial- and teaching-related stress[46].
3. **Kamthan, Shivam; et.al. (2020)** conducted a study among medical and paramedical students in Swami Vivekananda Subharti University, Meerut (U. P.). The stress was assessed by using Kessler 10-item psychological distress scale (K10) along with a pretested socio-demographic and preventive variables. 46(16.1%) paramedical students were suffering from severe stress. The female students had higher stress as compared to male students[47].
4. A study was conducted by **Abatayo Jediael Faith C., et. al (2023)** among Paramedical Students at Cebu Institute of Technology – University. The study included 101 paramedical students. 80% of male paramedical students had moderate level of stress and 16% of male paramedical students had high level of stress. On the other hand, mostly of the female paramedical students had a moderate level of stress which had 87% out of 100% and 13% of female paramedical students had high levels of stress. This study shows that male students have higher levels of stress as compared to the female counterparts[48].

5. A cross sectional survey study by **George, S.A., et. al. (2022)** in hand was done. A convenient sample method was used. It consists of 200 paramedical students between the age of 18 and 23 years from various paramedical colleges in Kerala especially from Ernakulum. This study result shows that there are 5% of highly stressed subjects and 85% are of medium stress, 10% of study sample has low stress. Results also show that 5 male (25%) and 15 female (75%) subjects have low stress, 53 male (31.17) and 117 female (68.82) subjects have moderate stress, 4 males (40%) and 6 females (60%) subjects have high stress. This study indicates higher levels of stress among females than males. Perceived stress scale was used for assessing the level of stress[49].

Quality of life and gender difference among paramedical students.

1. **Asha and Kengnal (2017)** investigated the quality of life (QoL) among postgraduate students at a private medical college in Karnataka. The study involved 121 students, of whom 108 provided complete data. The sample had an average age of 28.4 years, with 64.8% male and 44.4% female students. Results showed that 50% of students were satisfied with their health, and 40% rated their overall QoL as "good." Male students reported consistently higher scores across all QoL domains—physical, psychological, social, and environmental—compared to female students, indicating gender-based differences in perceived well-being. Paramedical students also scored higher in each domain than students from other specialties, suggesting that both gender and specialization play a role in QoL[50].

2. A study by **Zhang et al. (2012)** explored quality of life (QoL) among Chinese medical students, utilizing the WHOQoL-BREF questionnaire to assess influencing factors across gender, year of study, specialty, and other personal characteristics. Conducted with 1,686 students from China Medical University, the study highlighted the reliability and validity of the WHOQoL-BREF for this demographic, evidenced by a Cronbach's α coefficient of 0.731 and an acceptable factor structure. Gender differences emerged as a significant factor, with male students generally reporting higher scores in the psychological health domain, consistent with findings that attribute males' higher scores to lower sensitivity to stress. In contrast, female students scored higher in the social relations domain, which may reflect their stronger relational and social skills, as seen in previous studies[51].

3. **Nayak et al. (2014)** assessed the quality of life (QoL) of medical students at Andhra Medical College (AMC), using the WHOQoL-BREF to evaluate physical, psychological, social, and environmental well-being. In this study, second- and final-year MBBS students reported higher scores in the environmental and social domains than their counterparts at China Medical College. Female AMC students scored significantly higher in the social domain (72.2) compared to Chinese female students (63.91). Additionally, AMC students from rural areas had better physical and psychological QoL scores than urban students[52].

4. **Almhdawi et al. (2021)** investigated the physical and mental health-related quality of life (HR-QoL) of Allied Health (AH) students across nine academic majors using the SF-12, DASS21, and Nordic Musculoskeletal Questionnaire.

Among 838 students (77.4% female), mental and physical HR-QoL scores revealed notable gender differences. Male students reported significantly higher mental HR-QoL scores (MCS), averaging 39.45±10.86, compared to female students ($P < 0.001$). The study also found that physical HR-QoL scores (PCS) varied significantly across majors and were affected by factors like anxiety, GPA, diet evaluation, and musculoskeletal pain. MCS was significantly influenced by clinical training hours, stress and depression levels, gender, GPA, sleep and diet quality, and neck pain[53].

5. In a study conducted by **Torres and Paragas (2019)** on nursing students in the Philippines, several social determinants—including gender, year level, academic load, sleep, and medical conditions—were associated with the psychological quality of life (QoL) domain. Males generally reported higher psychological QoL scores than females, aligning with prior research suggesting that females tend to experience more emotional instability, anxiety, and depression. The findings also noted that body image concerns had a greater impact on QoL for females. The study found better QoL scores for nursing students in social relationships and environment domains, whereas psychological and physical health domains were lower. Physical health was notably affected by gender, sleep hours, and medical conditions, while the environmental domain was positively correlated with monthly allowance. This evidence underscores the need for targeted mental health and wellness support for female nursing students, given the specific challenges they face in maintaining psychological well-being during their academic journey[54].

6. **Ashraf, H. et. al. (2022)** examined life satisfaction and psychological stress levels among male and female allied health college students, a comparative study. The study found that female students reported significantly higher scores on the Satisfaction with Life Scale (SWLS) compared to their male counterparts ($p < 0.05$). This suggests that, despite experiencing higher stress levels, female students may have better coping mechanisms or social support networks that contribute to greater life satisfaction as compared to the males[55].

MATERIALS AND METHODS

MATERIALS AND METHODS

RESEARCH QUESTION

What is the level of depression, anxiety, stress and quality of life among paramedical students?

Is there a gender difference in depression, anxiety, stress and quality of life among paramedical students?

HYPOTHESIS

- *Null Hypothesis (H0):* There would be no significant difference between male and female paramedical students with regard to depression, anxiety, stress and quality of life.
- *Alternative Hypothesis (H1):* There would be a significant difference between male and female paramedical students with regard to depression, anxiety, stress and quality of life.

STUDY DESIGN:

A cross-sectional study design was used in this study to examine the gender differences in paramedical students' levels of stress, anxiety, depression, and quality of life.

SAMPLE SIZE:

According to a South Indian study, the prevalence rates of depression, anxiety, and stress were 59%, 43%, and 11%, respectively, which were used to determine the sample size. A total of 218 participants, 109 males and 109 females was taken for the study.

SAMPLE COLLECTION METHOD:

This study utilized purposive sampling to select participants based on specific standards to accurately represent the intended group.

INCLUSION CRITERIA:

Participants between the 18 to 25 years of age.

Participants willing to give informed consent.

EXCLUSION CRITERIA:

Participants below the age of 18 years or above 25 years.

Participants who differently abled.

TEST MEASURES:

After completing the consent form and preliminary identification data sheet, the following standardized test measures was administered:

General Health Questionnaire (GHQ)

Depression, Anxiety and Stress Scale (DASS-42)

Quality of Life: WHOQOL- BREF (26)

PRELIMINARY IDENTIFICATION DATA SHEET

Following the completion of the consent form, a preliminary identifying data sheet—which was created specifically for this study—was completed. Questions on the subject or samples' socio-demographic information, family information, and educational background are included in the preliminary identification data sheet.

CONSENT FORM

A consent form, which gives participants comprehensive information about the study's objectives, procedures, risks, and advantages, is used in this research to guarantee ethical standards and voluntary participation. Both Hindi and English versions of this consent form are available.

GENERAL HEALTH QUESTIONNAIRE (GHQ)

Developed by Goldberg in 1972, the General Health Questionnaire (GHQ) is a commonly used screening tool for the identification of common and mild mental disorders. Self-administered screening questionnaire GHQ-12 is used for all ages beginning in adolescence. In 2008, María Del Pilar Sánchez-López et al. came to the conclusion that GHQ-12 can be used to identify nonpsychotic psychiatric problems in adolescence and adulthood as well as to assess people's overall psychological well-being. Twelve items make up the GHQ-12, which is scored on a 4-point Likert scale. Possible answers include "less than usual," "no more than usual," "rather more than usual," and "much more than usual." Psychiatric impairment levels within and between samples should be compared using this scale. The reliability of GHQ is 0.89 and the validity stands in 0.84[57].

DEPRESSION, ANXIETY AND STRESS SCALE (DASS- 42)

At the 18th annual conference of the Australian Psychological Society in 1983, Lovibond et al. presented the first iteration of the DASS. However, the 1995 publication by Lovibond & Lovibond contained the DASS in its first published form. Professor Peter Lovibond and Professor Syd Lovibond created DASS-42. DASS 42 has a validity score of 0.96 and a reliability score of 0.70[58].

WHO-QUALITY OF LIFE (WHO-QoL 26)

The World Health Organization Quality of Life Brief Version (WHOQOL-BREF) is a condensed version of the WHOQOL-100 quality of life measure, which consists of 26 items. Each item is rated on a 5-point Likert scale, where 1 denotes a bad or negative perception and 5 denotes a high or positive perception. After assigning a score to each domain, the score is transformed into a scale from 0 to 100. A higher quality of life is correlated with higher scores. A higher score indicates a higher subjective quality of life. Reliability of WHO QoL BREF 26 is 0.91 and its validity stands at 0.85[59].

STATISTICAL ANALYSIS

A comprehensive statistical analysis was done for this investigation. For every variable, the initial mean and standard deviation were calculated. The research was conducted with the aim of assessing the gender difference and the relationship of depression, anxiety, stress with quality of life among male participants and female participants. For this purpose, the data collected were entered in Microsoft Excel, and analysis was done using SPSS 23. T test was used to assess the gender difference and Chi Square test was used to assess the relationship between the variables and gender.

ETHICAL CONSIDERATION

The ethics committee of Santosh Deemed to be university, Ghaziabad, Uttar Pradesh, approved this work. The study ensured data confidentiality and privacy, with participants' informed consent and collaboration from relevant authorities. It aimed to identify early markers of difficulties in the target group, enabling timely intervention measures for educators and clinicians. Participants were fully aware of withdrawal rights.

RESULTS

RESULTS

This research was conducted with the aim of assessing the gender difference in depression, anxiety, stress and quality of life among paramedical students. For this purpose, the data was analysed using the T-test and Chi square.

Table 1: ***Tabular result of the total number and percentage of respondents in terms of age.***

Age	**Frequency**	**Percent**
	(N)	**(%)**
18–20	124	56.9%
21–22	46	21.1%
>22	48	22.0%
Total	**218**	**100.0%**

Note. N= no. of respondents, %= percentage

Table 1 and figure 1 denotes the tabular and graphical representations of the age group, number of respondents and the percentage of the sample size according to age group that was collected for the purpose of this research study. Majority of the respondents fall under the age group 18-20 (124; 56.9%) followed by > 22 (48; 22.0%) and then 21-22 (46; 21.1%).

Figure 1: ***Graphical representation of the total number and percentage of respondents in terms of age.***

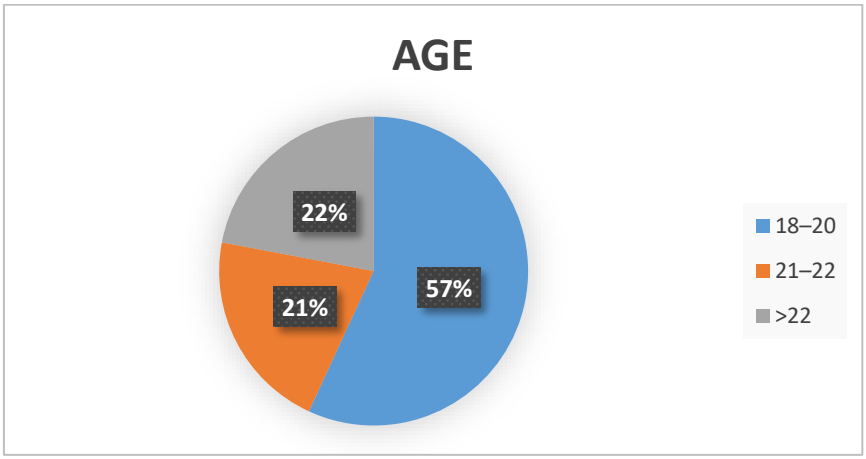


Table 2: ***Tabular result of the total number and percentage of respondents in terms of gender.***

Gender	**Frequency (N)**	**Percent (%)**	**Valid Percent**
Female	109	50.0%	50.0%
Male	109	50.0%	50.0%
Total	**218**	**100.0%**	**100.0%**

Note. N= no. of respondents, %= percentage

Table 2 and figure 2 denotes the total number and percentage of respondents in terms of gender. Since this research study is based on gender difference, equal distribution of the sample size was taken into consideration. 109 male participants and 109 female participants were selected on the basis of random sampling in order to collect the data required for this research study.

Figure 2: ***Graphical representation of the total number and percentage of respondents in terms of gender.***

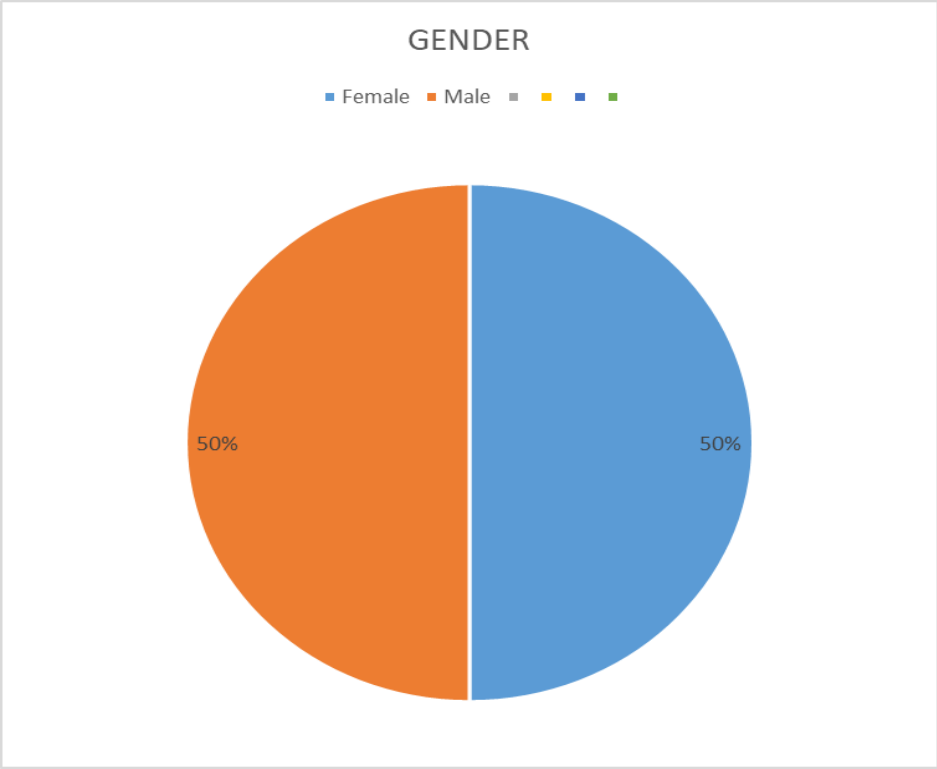


Table 3: ***Tabular result of the institution from where data was collected***

Institution	**Frequency (N)**	**Percent (%)**
Santosh deemed to be University	218	100%
Total	**218**	**100.0%**

Note. N= no. of respondents, %= percentage

Table 3 and figure 3 are the tabular and graphical representations of the number of participants taken from this institution from where the data was collected and sample size were chosen. Santosh deemed to be University was the sole centre for the collection of data and sample size.

Figure 3: ***Graphical representation of the institution from where data was collected***

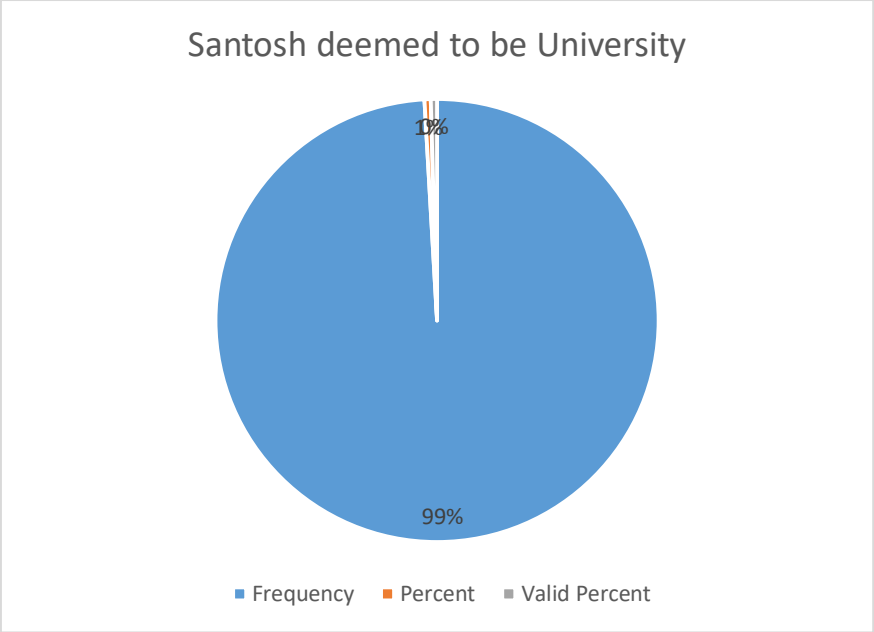


Table 4: ***Tabular result of the total number and percentage of respondents in terms of course***

Course	**Frequency (N)**	**Percent (%)**
B.Sc. Nursing	30	13.8%
Bachelors of Occupational Therapy	38	17.4%
Bachelors of Optometry	24	11.0%
Bachelors of Physiotherapy	64	29.4%
G.N.M	62	28.4%
Total	**218**	**100.0%**

Note. N= no. of respondents, %= percentage

Table 4 and figure 4 represents the tabular and graphical representations of the total number and percentage of respondents in terms of course. Majority of the data were collected from Bachelors of Physiotherapy with a response rate of 64 (29.4%) followed by G.N.M with a response rate of 62 (28.9%) and Bachelors of Occupational Therapy with response rate of 38 (17.4%).

Figure 4: ***Graphical representation of the total number and percentage of respondents in terms of course.***

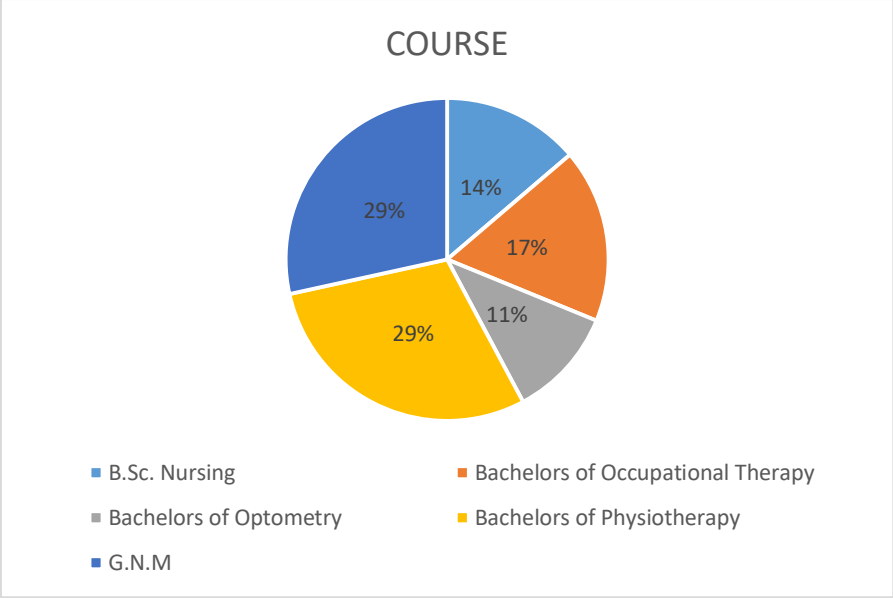


Table 5: ***Tabular result of Mean for the General Health Questionnaire by gender***

Gender	Mean	Interpretation
Female (n=109)	12.91	Moderate
Male (n=109)	12.61	moderate

Table 5 and figure 5 represents the tabular and graphical representations of the mean scores for the General Health Questionnaire by gender. Although both groups' interpretation fall under moderate, female participants scored a slightly higher mean score (12.91) indicating a better general health as compared to the male participants (12.61).

Figure 5: ***Graphical representation of Mean for the General Health Questionnaire by gender***

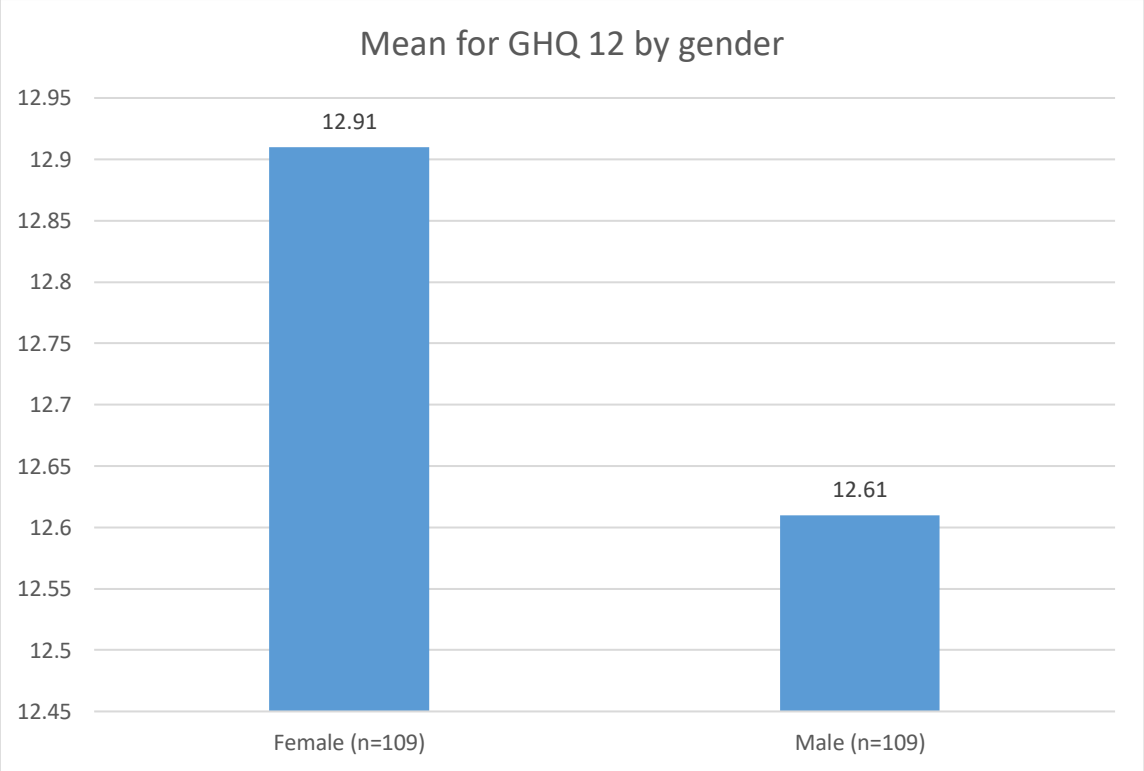


Table 6: ***Tabular result of the total number and percentage of respondents in terms of General Health Questionnaire***

GHQ Domains	Frequency (N)	Percent (%)
Moderate	84	38.5%
Normal	122	56.0%
SEVERE	12	5.5%
Total	**218**	**100.0%**

Note. N= no. of respondents, %= percentage

Table 6 and figure 6 represents the tabular and graphical representations of the total number and percentage of respondents in terms of General Health Questionnaire. Most of the respondents scored under the normal domain (122; 56.0%) followed by moderate (84; 38.5%)

Figure 6: ***Graphical representation of the total number and percentage of respondents in terms of General Health Questionnaire***

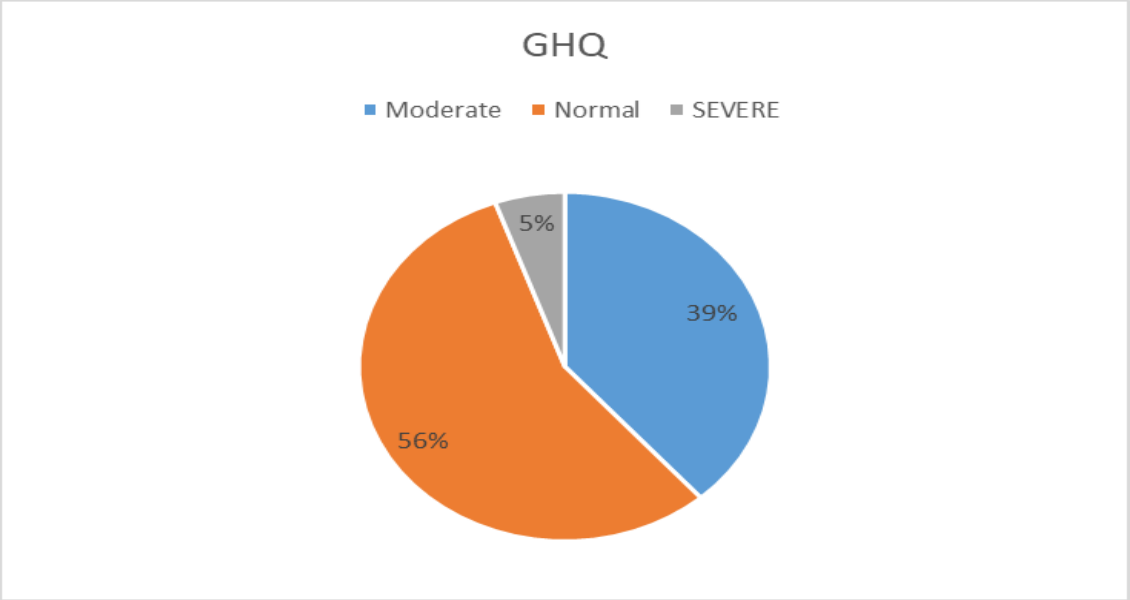


Table 7: ***Tabular result of the total number of respondents and mean and SD in terms of Depression, Anxiety, Stress Scale (DASS-42) and WHO Quality of Life (WHOQoL-26)***

	Gender	N	Mean	Std. Deviation
Depression	Female	109	13.69	7.699
	Male	109	12.44	7.558
Anxiety	Female	109	12.67	6.822
	Male	109	12.15	7.474
Stress	Female	109	18.73	7.950
	Male	109	16.10	8.050
WHOQoL26	Female	109	56.92	12.062
	Male	109	54.75	9.923

Table 7 and figure 7 represents the tabular and graphical representations of the total number of respondents, mean and Standard Deviation in terms of depression, anxiety, stress and quality of life. Statistically significant difference was found in the stress domain.

Figure 7: ***Graphical representation of the total number of respondents and mean and SD in terms of Depression, Anxiety, Stress Scale (DASS-42) and WHO Quality of Life (WHOQoL-26)***

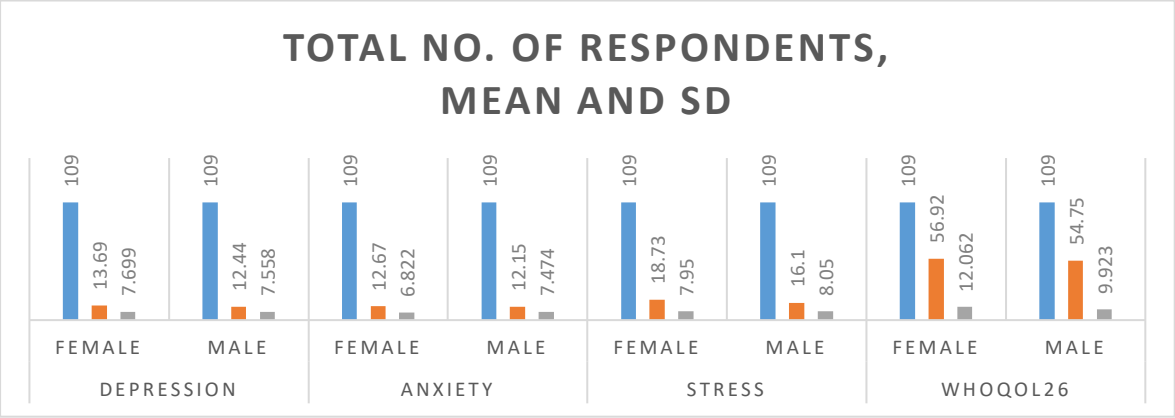
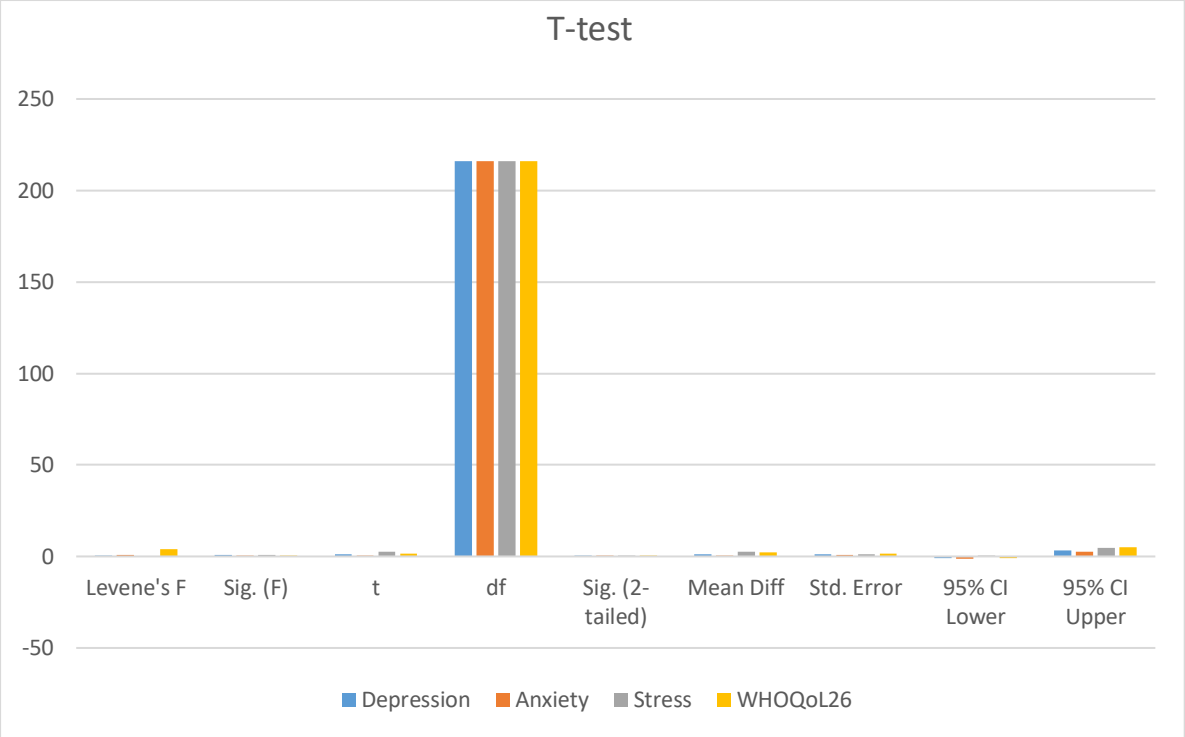


Table 8: ***Tabular representation of t-test summary of the psychological variables***

	Levene's F	**Sig. (F)**	**t**	**df**	**Sig. (2-tailed)**	**Mean Diff**	**Std. Error**	**95% CI Lower**	**95% CI Upper**
Depression	0.026	0.873	1.207	216	0.229	1.248	1.033	-0.789	3.284
Anxiety	0.843	0.360	0.540	216	0.590	0.523	0.969	-1.388	2.433
Stress	0.000	0.996	2.430	216	**0.016**	2.633	1.084	**0.497**	**4.769**
WHOQoL26	3.897	0.050	1.447	216	0.149	2.165	1.496	-0.784	5.114

Figure 8: ***Graphical representation of t-test summary of the psychological variables***



An independent samples t-test was conducted to examine gender differences in levels of depression, anxiety, stress, and quality of life (as measured by the WHOQoL-26) among male and female participants (N = 109 in each group). After the analysis of the data, statistically significant difference was observed in the domain of stress.

Table 9: ***Tabular representation of depression severity by gender***

Domains	Female (n=109)	Male (n=109)	Total (n=218)
Extreme Severe	4 (3.7%)	2 (1.8%)	6 (2.8%)
Mild	17 (15.6%)	25 (22.9%)	42 (19.3%)
Moderate	30 (27.5%)	23 (21.1%)	53 (24.3%)
Normal	39 (35.8%)	42 (38.5%)	81 (37.2%)
Severe	19 (17.4%)	17 (15.6%)	36 (16.5%)

- $\chi^2(4) = 3.337$, **p = 0.503** → *Not significant*

Table 9 and figure 9 are the tabular and graphical representation of depression by gender. Although no statistically significant relationship (**p = 0.503** → *Not significant*) is observed, it is slightly observable from the table that female participants scored a higher severity score as compared to male participants.

Figure 9: G*raphical representation of depression severity by gender*

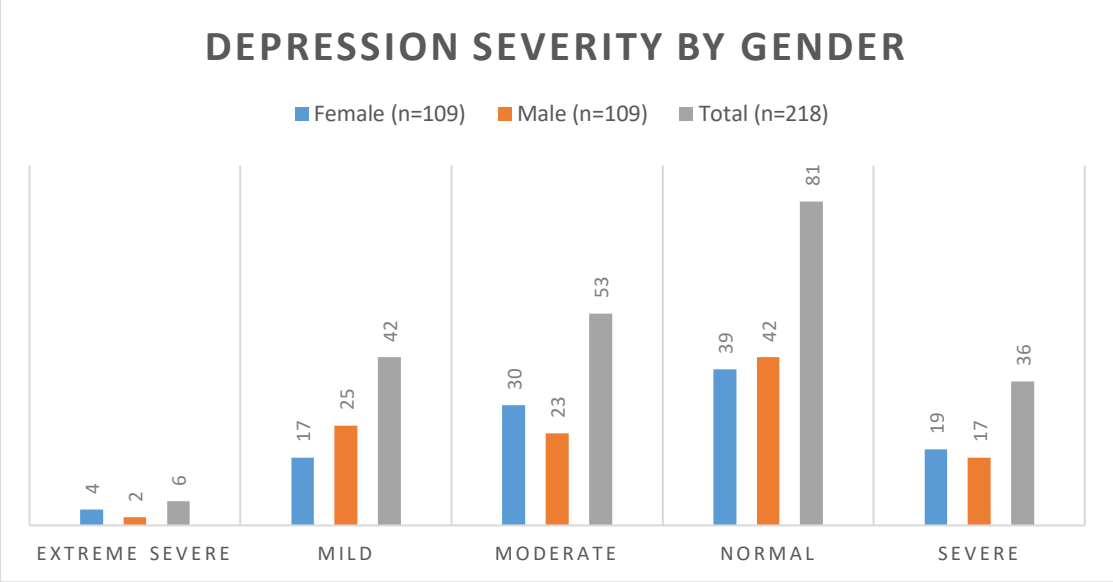


Table 10: ***Tabular representation of anxiety severity by gender***

Domains	**Female (n=109)**	**Male (n=109)**	**Total (n=218)**
Extreme Severe	11 (10.1%)	16 (14.7%)	27 (12.4%)
Mild	12 (11.0%)	20 (18.3%)	32 (14.7%)
Moderate	34 (31.2%)	27 (24.8%)	61 (28.0%)
Normal	24 (22.0%)	30 (27.5%)	54 (24.8%)
Severe	28 (25.7%)	16 (14.7%)	44 (20.2%)

- $\chi^2(4) = 7.669$, **p = 0.105** → *Not significant*

Table 10 and figure 10 are the tabular and graphical representation of depression by gender. Although no statistically significant relationship (**p = 0.105** → *Not significant*) is observed, it is slightly observable from the table that female participants scored a higher severity score as compared to male participants.

Figure 10: ***Graphical representation of anxiety severity by gender***

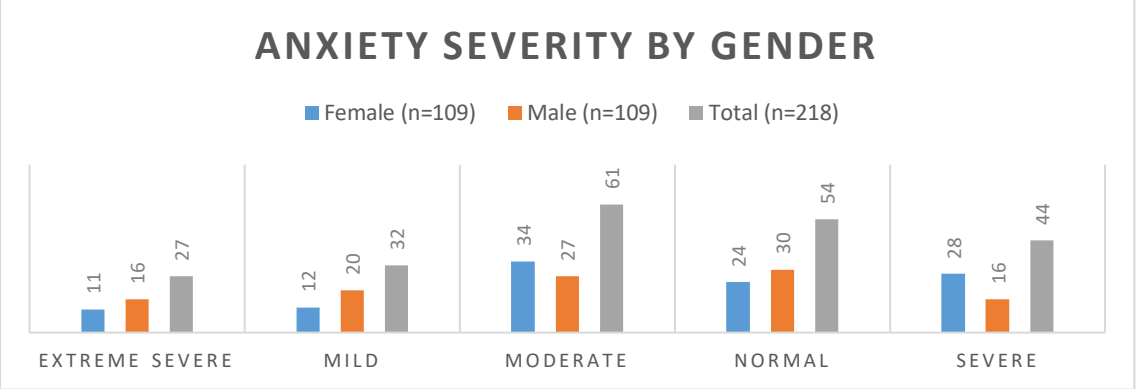


Table 11: ***Tabular representation of stress severity by gender***

Domains	Female (n=109)	Male (n=109)	Total (n=218)
Extreme Severe	5 (4.6%)	3 (2.8%)	8 (3.7%)
Mild	9 (8.3%)	20 (18.3%)	29 (13.3%)
Moderate	43 (39.4%)	26 (23.9%)	69 (31.7%)
Normal	37 (33.9%)	49 (45.0%)	86 (39.4%)
Severe	15 (13.8%)	11 (10.1%)	26 (11.9%)

- $\chi^2(4) = 11.151$, **p = 0.025 → Significant**

Table 11 and figure 11 represents the tabular and graphical representations of stress severity by gender. There is a statistically significant relationship (**p = 0.025 → Significant**). It can be observed that females scored a higher stress level as compared to males

Figure 11: ***Graphical representation of stress severity by gender***

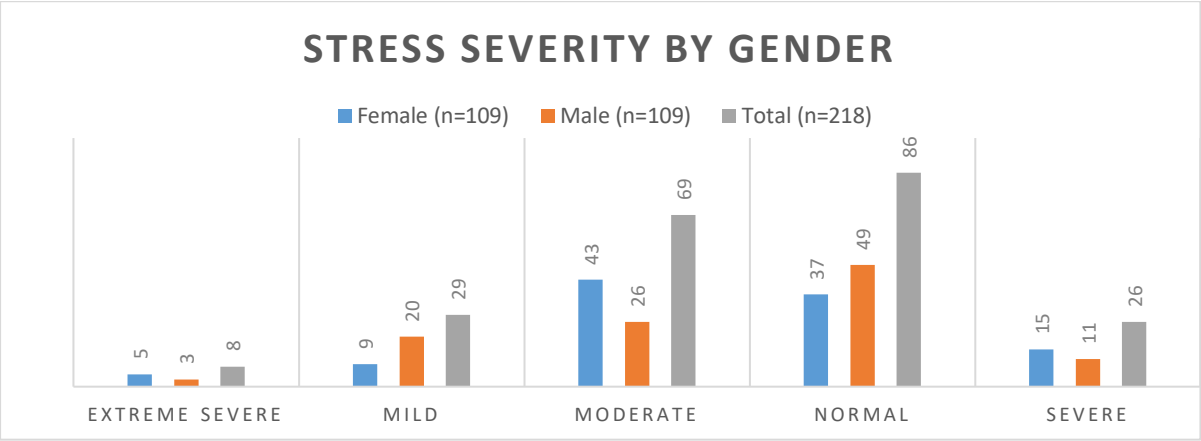


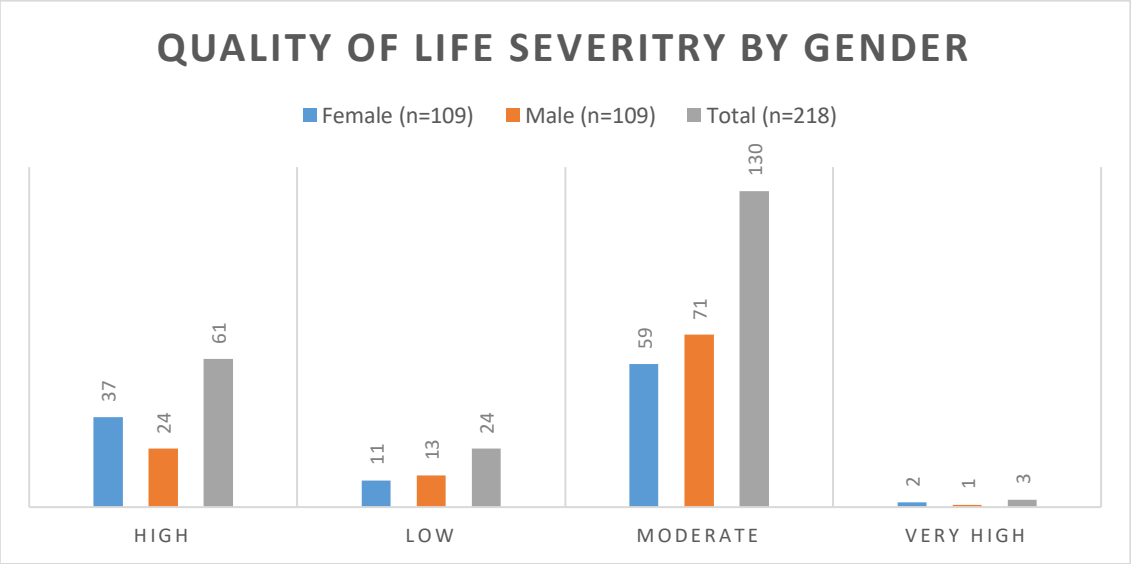
Table 12: ***Tabular representation of quality of life severity by gender***

Domains	Female (n=109)	Male (n=109)	Total (n=218)
High	37 (33.9%)	24 (22.0%)	61 (28.0%)
Low	11 (10.1%)	13 (11.9%)	24 (11.0%)
Moderate	59 (54.1%)	71 (65.1%)	130 (59.6%)
Very High	2 (1.8%)	1 (0.9%)	3 (1.4%)

- $\chi^2(3) = 4.378$, **p = 0.223** → *Not significant*

Table 12 and figure 12 represents the quality of life severity by gender. Although there is no statistically significant relationship (**p = 0.223** → *Not significant*) it can be observed through the table that females scored a higher level of quality of life, indicating a better living as compared to that of male.

Figure 12: ***Graphical representation of quality of life severity by gender***



DISCUSSION

DISCUSSION

The stresses people encounter, the coping mechanisms they can use, and the social norms surrounding the expression of distress are all variables that change between genders, geographical locations, and historical times, and these factors frequently contribute to the gender inequalities in mental illness rates. In the past, health research has mostly ignored the roles of age, sex, and gender. Students in a variety of academic fields, including those in the medical and paramedical fields, frequently worry about mental health conditions like stress, anxiety, and depression. Students' general well-being, academic achievement, and quality of life can all be strongly impacted by these psychological issues. The purpose of the current study is to evaluate the gender differences in paramedical students' levels of stress, anxiety, depression, and quality of life. The instruments used for data collection were the General Health Questionnaire (GHQ-12), the Depression, Anxiety, Stress Scale (DASS-42) and the WHO Quality of Life (WHOQoL-26). The gathered data was analysed using the T-test and Chi Square statistical analysis. On the basis of table 1 and figure 1, the total number of respondents according to age are: 18-20 (124), 21-22 (46), > 22 (48) denoting that the age group between 18-20 participated more in this study. Table 2 and figure 2 shows the number of participants for both genders, i.e. 109 male and 109 female participants. The sample is perfectly balanced by gender, ensuring no bias in gender representation allowing for fair comparison in gender-based analyses. Total number of participants were 218 from five different paramedical departments and Santosh deemed to be University was the centre for the sample size and data collection.

As shown in table 6 and graphically illustrated in figure 6, General Health Questionnaire scores are 56.0 % (122; normal), 38.5% (84; moderate) and 5.5% (12; severe). General Health Questionnaire shows no significant difference in basis of gender (refer to table 5 and figure 5) although the mean score of females are slightly higher (12.91) as compared to the males (12.61), indicating a better general health.

The results of the entire sample, as well as the mean and standard deviation (SD) for the Depression, Anxiety, Stress Scale (DASS-42) and WHO Quality of Life (WHOQoL-26), are shown in Table 7 and Figure 7. In the variable of depression, females scored a slightly higher mean (13.69) and S.D (7.699) as compared to males mean score (12.44) and S.D (7.558) This means that among females, the individual depression scores vary on average by about 7.70 points from the mean (13.69). Similarly, male scores deviate by about 7.56 points from their mean (12.44).The variability is similar in both groups.

In the variable of anxiety, females scored a higher mean score (12.67) as compared to the males mean score (12.15). As for the S.D. females scored 6.822 and males scored 7.474 which means that for females**,** most individual anxiety scores fall closer to the average (12.67) and as for males**,** and the scores are more spread out from the average (12.15). Some may score very low, and others quite high.

Males scored an average of 16.10 on the stress variable, whereas females earned an average of 18.73. Regarding the S.D., males scored 8.050 while females earned 7.950. This means that both genders show high and similar variability in stress scores. A higher SD suggests more variation in individual experiences of stress within each gender.

In the variable of WHO QoL, females scored a mean score of 56.92 while males scored 54.75. As for S.D, females scored an S.D of 12.062 and males scored an S.D of 9.923 which means that the largest S.D overall is in female QoL scores, indicating a wide range of perceived quality of life among women. Males also show some variability, but it's less than that of females.

For all of the psychological variables employed in this study (depression, anxiety, stress, and quality of life), the T-test was utilized to determine the association between the two groups, i.e., male and female participants, as shown in Table 8 and Figure 8. The mean depression score was slightly higher among females (M = 13.69, SD = 7.70) than males (M = 12.44, SD = 7.56). However, this difference was not statistically significant, t (216) = 1.207, p = 0.229.

Females also reported slightly higher anxiety levels (M = 12.67, SD = 6.82) than males (M = 12.15, SD = 7.47), but the difference was not statistically significant, t (216) = 0.540, p = 0.590.

A significant gender difference was found in stress scores, with females reporting higher stress (M = 18.73, SD = 7.95) compared to males (M = 16.10, SD = 8.05). This difference was statistically significant, t (216) = 2.430, p = 0.016, with a mean difference of 2.63 (95% CI [0.497, 4.769

Although females had a slightly higher mean quality of life score (M = 56.92, SD = 12.06) than males (M = 54.75, SD = 9.92), the difference was not statistically significant, t (216) = 1.447, p = 0.149.

SCORE INTERPRETATION FOR DEPRESSION, ANXIETY, STRESS SCALE (DASS-42) ACCORDING TO THE SEVERITY BY GENDER

Table 9 and figure 9 represents the severity of depression by gender. Although no statistically significant difference (**p = 0.503** → *Not significant*) is seen, it is still mildly visible through the tabular representation that the depression level among female participants are more as compared to the male participants if we compare the scores in the given domains (extreme severe, mild, moderate, normal, severe.). The results of this study were corroborated by a cross-sectional study of 208 paramedical students carried out by **Suresh, A., et al. in 2023**. In order to determine the severity of depression, they employed Beck's depression inventory tool. They discovered that the prevalence of depression included borderline, moderate, severe, and extreme forms, respectively. Women with depression made up 78% of the sample (40), whereas men with depression made up 22% (11)[38]. This research study is supported by another study by **Al-Muhanna et al. (2020),** which investigated the prevalence of depression among Saudi Arabian medical and paramedical students and discovered that female students had greater levels of depressive symptoms than their male counterparts. Among the factors behind this discrepancy include the fact that female students experience higher levels of academic stress and are more sensitive to environmental pressures[39].

Table 10 and figure 10 represent the severity of anxiety by gender. Statistically no significant difference (**p = 0.105** → *Not significant*) is visible yet, when compared through the tabular representation, it can be seen that the anxiety level among the female participants may be slightly higher as compared to the male participants if we compare the scores in the given domains (extreme severe, mild, moderate, normal, severe).

The general literature suggests otherwise as we have seen gender difference in anxiety level across various studies. At a private medical college hospital and research centre in South India, **Raja, S., et al. (2022)** studied medical and paramedical students. The Depression, Anxiety, and Stress Scale-21 (DASS-21) and the Perceived Stress Scale (PSS) were employed. Anxiety was present in 43% of the study participants. Females had a higher prevalence (44%) than males (39%) [43]. **Asayesh, H., et al. (2015)** conducted a second study in which 233 randomly chosen paramedical students from Qom University took part. Data was gathered using the self-efficacy scale, test anxiety inventory, and demographic information sheet. Both logistic regression analysis and the Pearson correlation coefficient were used to examine the data. 43 percent of the students scored higher than average on test anxiety. Test anxiety decreased as the self-efficacy score increased, according to the univariate logistic regression analysis. (95% CI: 0.73-0.86, OR: 0.79). Additionally, female students were more likely than male pupils to have test anxiety. (95% CI: 1.01-2.99, OR: 1.74) [45].

Table 11 and figure 11 represents the severity of stress by gender. Statistically significant difference was found (, **p = 0.025 → Significant)** between male participants and female participants with female participants being more prone towards stress (refer to table 11 and figure 11). In a research of medical and paramedical students at Swami Vivekananda Subharti University, **Kamthan, Shivam, et al. (2020)** placed a strong emphasis on the disparities in stress levels by gender. The Kessler 10-item psychological distress scale (K10) was used to measure the stress, in addition to pretested sociodemographic and preventative characteristics. Of the paramedical students, 46 (16.1%) were experiencing extreme stress. Compared to male students, female students experienced higher levels of stress[47]**.** Another study was conducted by **Chaudhary, S., et al. (2022)** from a private health sciences university in northern India.

The study included 354 students, 154 of whom were paramedical students, ranging in age from 18 to 22. 16.6% of women and 8.5% of men reported moderate stress, 14.9% of women and 7.14% of men reported light stress, and 21.7% of women and 8.5% of men reported severe stress. Time pressure, a severe workload, failure-related anxiety, and the frequency of exams were identified by Ragab et al. as the primary causes of stress. A third of students reported having at least one source of stress connected to teaching and psychological issues[46.]

Overall analyses of DASS-42 indicates that female participants are more prone towards psychological issues as compared to male participants although male participants too shows disturbances in some domains (i.e. anxiety and quality of life).

SCORE INTERPRETATION FOR WHO QUALITY OF LIFE (WHOQoL 26) ACCORDING TO THE SEVERITY BY GENDER

The quality of life by gender is shown in Table 12 and Figure 12. Although there was no statistically significant difference ($p = 0.223 \rightarrow$ Not significant) between male and female participants in the quality of life domain, table 12 suggests that male participants are more likely to experience a lower quality of life than female participants (female; Low-11; Male; Low-13), as higher scores indicate a better quality of life. A comparative research of life satisfaction and psychological stress levels among male and female allied health college students was conducted by **Ashraf, H. et al.** in **2022**. According to the study, female students' Satisfaction with Life Scale (SWLS) scores were significantly higher than those of their male counterparts ($p < 0.05$). This implies that, in contrast to male students, female students may have superior coping strategies or social support systems that lead to higher levels of life satisfaction even when they experience higher stress levels[55].

CONCLUSION

CONCLUSION

Mental health encompasses our social, psychological, and emotional well-being. It affects our feelings, ideas, and actions. It also affects our ability to handle stress, communicate with people, and make sensible choices. Students with good mental health are prepared to learn. They are more likely to have higher self-esteem and be motivated to achieve their academic goals. It may be challenging for students to concentrate, remember, and solve tasks if they are dealing with mental health concerns or have been diagnosed with a mental illness. Additionally, they could find it difficult to meet expectations in the classroom. Attendance and even graduation rates are impacted by a student's mental health. Students in a variety of academic fields, including those in the medical and paramedical fields, frequently worry about mental health conditions like stress, anxiety, and depression. Students' general well-being, academic achievement, and quality of life can all be strongly impacted by these psychological issues.

Although no statistical significant differences were found in depression, anxiety and quality of life, it can be observed through the tabular representations (refer table 9 and table 10) that the scores in depression and anxiety are higher among the female participants as compared to the male participants and the scores in the quality of life (refer to table 12) indicates a poorer scores among the male participants as compared to the female participants. All things considered, we can state that there is a correlation between the two groups—male and female—in terms of depression, anxiety, stress, and quality of life, as well as a gender difference in these areas among paramedical students.

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ANNEXURES

ANNEXURE I – PRELIMINARY

IDENTIFICATION DATA SHEET

(ENGLISH)

SANTOSH MEDICAL COLLEGE AND HOSPITALS

DEPARTMENT OF CLINICAL PSYCHOLOGY

PRELIMINARY DATA SHEET

Name: **Age:** **Date:**

Gender:

Educational qualification:

Marital status:

Residential Address:

Educational Qualification:

Current Institution:

Batch and Program:

Contact Number:

Family structure: Nuclear/Joint:

Area: Urban/Rural

PRESENCE OF-

Alcohol use: Yes/No

Tobacco use: Yes/No

Nicotine use: Yes/No

Email address:

ANNEXURE II – PRELIMINARY

IDENTIFICATION DATA SHEET

(HINDI)

संतोष मेडिकल कॉलेज और अस्पताल

क्लिनिकल साइकोलॉजी विभाग

प्रारंभिक डेटा शीट

नाम: आयु: दिनांक:

लिंग:

शैक्षणिक योग्यता:

वैवाहिक स्थिति:

आवासीय पता:

शैक्षणिक योग्यता:

वर्तमान संस्थान:

बैच और कार्यक्रम:

संपर्क संख्या:

पारिवारिक संरचना: एकल/संयुक्त:

क्षेत्र: शहरी/ग्रामीण

उपस्थिति-

शराब का उपयोग: हाँ/नहीं

तम्बाकू का उपयोग: हाँ/नहीं

निकोटीन का उपयोग: हाँ/नहीं

ईमेल पता:

ANNEXURE III – CONSENT FORM

(ENGLISH)

SANTOSH MEDICAL COLLEGE AND HOSPITALS

DEPARTMENT OF CLINICAL PSYCHOLOGY

CONSENT FORM

Name of Participant: Date:

You are requested to be a part of the study titled **"GENDER DIFFERENCES IN DEPRESSION, ANXIETY, STRESS AND QUALITY OF LIFE AMONG PARAMEDICAL STUDENTS"** that is to be conducted in the department of Clinical Psychology at Santosh deemed to be University, Ghaziabad, Uttar Pradesh/ NCR Delhi.

Your voluntary participation in this study is important. If anytime you are not willing to continue, you can withdraw from the study. The information obtained from you will be kept confidential and will only be used to fulfil the objective of this study. This study is free of cost. If you have any questions feel free to ask the investigators at: yangtilongkumer99@gmail.com/ oliviaryan1995@gmail.com

I _____ give my consent voluntarily to participate in this research.

Investigators: Nayangben Lkr (MSc. Clinical Psychology, 2nd year, Dept. of Clinical Psychology, Santosh deemed to be University), Miss Swati (Assistant Professor, Dept. of Clinical Psychology) and Dr. Rani Srivastava (Prof. and Head, Dept. of Clinical Psychology, Santosh Deemed to be University)

ANNEXURE IV – CONSENT FORM

(HINDI)

संतोष मेडिकल कॉलेज और अस्पताल

क्लिनिकल साइकोलॉजी विभाग

सहमति प्रपत्र

प्रतिभागी का नाम: दिनांक:

आपसे अनुरोध है कि आप **"पैरामेडिकल छात्रों में अवसाद, चिंता, तनाव और जीवन की गुणवत्ता में लिंग भेद"** नामक अध्ययन का हिस्सा बनें, जो संतोष डीम्ड टू बी यूनिवर्सिटी, गाजियाबाद, उत्तर प्रदेश के क्लिनिकल साइकोलॉजी विभाग में आयोजित किया जाना है।

इस अध्ययन में आपकी स्वैच्छिक भागीदारी महत्वपूर्ण है। यदि आप कभी भी अध्ययन जारी रखने के इच्छुक नहीं हैं, तो आप अध्ययन से हट सकते हैं। आपसे प्राप्त जानकारी गोपनीय रखी जाएगी और इसका उपयोग केवल इस अध्ययन के उद्देश्य को पूरा करने के लिए किया जाएगा। यह अध्ययन निःशुल्क है। यदि आपके कोई प्रश्न हों तो आप जांचकर्ताओं से इस पते पर पूछ सकते हैं: yangtilongkumer99@gmail.com / oliviaryan1995@gmail.com

मैं _____ स्वेच्छा से इस शोध में भाग लेने के लिए अपनी सहमति देता हूँ।

जांचकर्ता: नायंगबेन एलकेआर (एमएससी. क्लिनिकल साइकोलॉजी, द्वितीय वर्ष, क्लिनिकल साइकोलॉजी विभाग, संतोष डीम्ड टू बी यूनिवर्सिटी), मिस स्वाति (सहायक प्रोफेसर, क्लिनिकल साइकोलॉजी विभाग) और डॉ. रानी श्रीवास्तव (प्रोफेसर और प्रमुख, क्लिनिकल साइकोलॉजी विभाग, संतोष डीम्ड टू बी यूनिवर्सिटी)

ANNEXURE V – GENERAL HEALTH QUESTIONNAIRE

GENERAL HEALTH QUESTIONNAIRE (GHQ)-12

INSTRUCTIONS: We should like to know if you have any medical complaints and how your health has been in general, over the past few weeks. We want to know about present and recent complaints, not those you had in the past.

Q NO 1, 3, 4, 7, 8, 12 is positively scored item & 2, 5, 6, 9, 10, 11 is negatively scored item.

SNO	PARTICULARS	always	often	Sometimes	never
1	Able to concentrate	0	1	2	3
2	Lost much sleep over worry	3	2	1	0
3	Playing a useful part	0	1	2	3
4	Felt capable of making decisions	0	1	2	3
5	Felt constantly under strain	3	2	1	0
6	Could not come over to difficulties	3	2	1	0
7	Able to enjoy day-to-day activities	0	1	2	3
8	Able to face up to your problems	0	1	2	3
9	Feeling unhappy and depressed	3	2	1	0
10	Been losing confidence in yourself	3	2	1	0
11	Thinking of self as worthless person	3	2	1	0
12	Feeling reasonably happy all things considered	0	1	2	3

ANNEXURE VI – WHO QUALITY OF LIFE

BREF 26 (ENGLISH VERSION)

WHOQOL-BREF

The following questions ask how you feel about your quality of life, health, or other areas of your life. I will read out each question to you, along with the response options. **Please choose the answer that appears most appropriate.** If you are unsure about which response to give to a question, the first response you think of is often the best one.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life **in the last four weeks.**

		Very poor	Poor	Neither poor nor good	Good	Very good
1.	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2.	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about **how much** you have experienced certain things in the last four weeks.

		Not at all	A little	A moderate amount	Very much	An extreme amount
3.	To what extent do you feel that physical pain prevents you from doing what you need to do?	5	4	3	2	1
4.	How much do you need any medical treatment to function in your daily life?	5	4	3	2	1
5.	How much do you enjoy life?	1	2	3	4	5
6.	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
7.	How well are you able to concentrate?	1	2	3	4	5
8.	How safe do you feel in your daily life?	1	2	3	4	5
9.	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about how completely you experience or were able to do certain things in the last four weeks.

		Not at all	A little	Moderately	Mostly	Completely
10.	Do you have enough energy for everyday life?	1	2	3	4	5
11.	Are you able to accept your bodily appearance?	1	2	3	4	5
12.	Have you enough money to meet your needs?	1	2	3	4	5
13.	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14.	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very poor	Poor	Neither poor nor good	Good	Very good
15.	How well are you able to get around?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16.	How satisfied are you with your sleep?	1	2	3	4	5
17.	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18.	How satisfied are you with your capacity for work?	1	2	3	4	5
19.	How satisfied are you with yourself?	1	2	3	4	5

20.	How satisfied are you with your personal relationships?	1	2	3	4	5
21.	How satisfied are you with your sex life?	1	2	3	4	5
22.	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23.	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24.	How satisfied are you with your access to health services?	1	2	3	4	5
25.	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to how often you have felt or experienced certain things in the last four weeks.

		Never	Seldom	Quite often	Very often	Always
26.	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	5	4	3	2	1

ANNEXURE VII – WHO QUALITY OF LIFE

BREF 26 (HINDI VERSION)

हूकॉल ब्रीफ (WHOQOL-BREF)*

विश्व स्वास्थ्य संगठन, दिसम्बर 1996
मनोविकार विभाग,
अखिल भारतीय आयुर्विज्ञान संस्थान
नई दिल्ली - 110 029.

आपके बारे में

हम चाहेंगे कि शुरूआत करने से पहले, आप अपने बारे में कुछ सामान्य प्रश्नों के उत्तर दें। सही उत्तर के चारों ओर गोला या खाली स्थान पर सही उत्तर लिखें –

आप क्या है? पुरूष स्त्री

आपकी जन्म तारीख क्या है? दिन/महीना/वर्ष ____/____/____

आपकी शिक्षा कहाँ तक हुई है?
बिल्कुल नहीं
प्राथमिक स्कूल तक
माध्यमिक स्कूल तक
हाई स्कूल तक
हाई स्कूल से आगे

आपका वैवाहिक स्तर क्या है?
अविवाहित
विवाहित
विवाहित की तरह साथ में रहते हुए
विवाहित लेकिन अलग हुए
तलाकशुदा
विधुर/विधवा

क्या आजकल आप बीमार है हाँ नही

अगर आपके स्वास्थ्य मे कुछ गढबड़ है तो आपके विचार में यह क्या है? _____

अनुदेश

यह प्रश्नावली पूछती है कि अपने जीवन की गुणवत्ता (क्वालिटी), स्वास्थ्य और जीवन के अन्य क्षेत्रों के बारे में आप कैसा अनुभव करते हैं। कृपया सभी प्रश्नों के उत्तर दें। यदि किसी प्रश्न के बारे में अनिश्चित हों कि कौन सा उत्तर दिया जाए, तो कृपया उसे चुनें जो सबसे उचित लगता हो है। यह अक्सर आपके मन में आने वाला पहला उत्तर हो सकता है।

कृपया अपने मापदण्डों, आशाओं, सुखों एवं चिंताओं को ध्यान में रखे। आपसे आग्रह है कि इन प्रश्नों के उत्तर अपने जीवन के पिछले दो सप्ताहो के आधार पर ही दें। उदाहरण के तौर पर पिछले दो सप्ताहों के आधार पर एक प्रश्न यह हो सकता है:

	बिल्कुल नहीं	थोड़ा	मध्यम	बहुत अधिक	पूरी तरह से
क्या आपको दूसरों से उस तरह को सहारा मिलता है, जिसकी आपको आवश्यकता है?	1	2	3	4	5

पिछले दो सप्ताहों में आपको दूसरों से कितना सहारा मिलता है उसके अनुसार ऊपर दिए गए पाँचों उत्तरों में से सबसे उचित उत्तर को चुनकर उसके साथ वाली संख्या पर गोला बनाकर दर्शाएं। जैसे अगर आपको दूसरों से बहुत अधिक सहारा मिला है तो आप संख्या 4 के चारों ओर गोला बनायेंगे, जैसा कि अगले पृष्ट पर दर्शाया गया है–

इस प्रश्नावली को उपयोग करने से पहले अनुमति के लिये सम्पर्क करें–

डा० शेखर सक्सेना,
अतिरिक्त आचार्य
मनोविकार विभाग
अखिल भारतीय आयुर्विज्ञान संस्थान, नई दिल्ली - 110 029.

	बिल्कुल नही	थोड़ा	मध्यम	बहुत अधिक	पूरी तरह से
क्या आपको दुसरों से उस तरह का सहारा मिलता है, जिसकी आपको आवश्यकता हैं?	1	2	3	④	5

अगर आपको पिछले दो सप्ताहों में दूसरों से उस तरह का सहारा जिसकी आपको आवश्यकता पड़ी, बिल्कुल नहीं मिला तो संख्या "।" के चारों ओर गोला लगायें। कृपया प्रत्येक प्रश्न को पढे, अपनी भावनाओं का मूल्याकन करें और प्रत्येक प्रश्न के लिए उस संख्या के चारों ओर गोला बनाएं जो आपके लिए उप्युक्त हो।

	बहुत खराब	काफी खराब	न अच्छा न खराब	काफी अच्छा	बहुत अच्छा
1. अपने जीवन की गुणवत्ता (क्वालिटी) का आप कितना मूल्यांकन करते है?	1	2	3	4	5
	बहुत असंतुष्ट	काफी असंतुष्ट	न संतुष्ट न असंतुष्ट	काफी संतुष्ट	बहुत संतुष्ट
2. अपने स्वास्थ्य से आप कितने संतुष्ट हैं?	1	2	3	4	5

निम्नलिखित प्रश्न पूछते हैं कि पिछले दो सप्ताहों में आपने कुछ चीजों को कितना अनुभव किया है?

	बिल्कुल नहीं	थोड़ा	मध्यम	बहुत अधिक	अत्याधिक
3. आपके विचार में दर्द किस हद तक आपको वह करने से रोकता है, जो आपको करना होता है?	1	2	3	4	5
4. रोजमर्रा की जिन्दगी चलाने में आपको किसी भी इलाज की कितनी आवश्यकता पड़ती है?	1	2	3	4	5
5. आप जीवन में कितना आनन्द लेते हैं?	1	2	3	4	5
6. अपने जीवन को किस हद तक आप सार्थक अनुभव करते हैं?	1	2	3	4	5
7. आप कितनी अच्छी तरह से मन को एकाग्र कर सकते हैं?	1	2	3	4	5

	बिल्कुल नही	थोड़ा	मध्यम	बहुत अधिक	अत्याधिक
8. अपने दैनिक जीवन में अपने आप को आप कितना सुरक्षित अनुभव करते हैं?	1	2	3	4	5
9. आपका भौतिक वातावरण कितना स्वास्थ्यवर्धक है?	1	2	3	4	5

निम्नलिखित प्रश्न आपसे इस बारे में पूछते हैं कि पिछले दो सप्ताहों में कुछ चीजें या कार्य आपने कितनी पूर्णता से अनुभव किए हैं या कर पाए हैं

	बिल्कुल नही	थोड़ा	मध्यम	बहुत अधिक	पूरी तरह से
10. क्या आपमें दिन प्रतिदिन के जीवन कार्यों के लिए पर्याप्त स्फूर्ति (चुस्ती) है?	1	2	3	4	5
11. क्या अपनी शारीरिक बनावट (रूप) को आप स्वीकार कर पाते है?	1	2	3	4	5
12. क्या आपके पास अपनी आवश्यकताएं पूरी करने के लिए पर्याप्त धन है?	1	2	3	4	5
13. आपको दिन प्रतिदिन के जीवन में जिन जानकारियों की आवश्यकता है, वे आपको किस हद तक उपलब्ध हैं?	1	2	3	4	5
14. अवकाश की कियाओं के अवसर आपको किस हद तक मिलते है?	1	2	3	4	5
15. आप कितनी अच्छी तरह इधर–उधर आ जा पाते हैं?	1	2	3	4	5

निम्नलिखित प्रश्न आपसे इस बारे में पूछते हैं कि पिछले दो सप्ताहों में अपने जीवन के विभिन्न पहलुओं के बारे मे आप कितने अच्छे या संतुष्ट रहे हैं?

	बहुत असंतुष्ट	काफी असंतुष्ट	न संतुष्ट न असंतुष्ट	काफी संतुष्ट	बहुत संतुष्ट
16. अपनी नींद से आप कितने संतुष्ट हैं?	1	2	3	4	5

	बहुत असंतुष्ट	काफी असंतुष्ट	न संतुष्ट न असंतुष्ट	काफी संतुष्ट	बहुत संतुष्ट
17. दैनिक जीवन कार्यों को करने की अपनी क्षमता से आप कितने संतुष्ट हैं?	1	2	3	4	5
18. अपनी कार्यक्षमता से आप कितने संतुष्ट हैं?	1	2	3	4	5
19. अपने से आप कितने संतुष्ट है?	1	2	3	4	5
20. अपने व्यक्तिगत संबंधों से आप कितने संतुष्ट हैं?	1	2	3	4	5
21. अपने यौन (सैक्स) जीवन से आप कितने संतुष्ट हैं?	1	2	3	4	5
22. अपने मित्रों से आपको जो सहारा मिलता है, उससे आप कितने संतुष्ट है?	1	2	3	4	5
23. अपने रहने की जगह की परिस्थितियों से आप कितने संतुष्ट है?	1	2	3	4	5
24. स्वास्थ्य सेवाओं तक आपकी पहुंच से आप कितने संतुष्ट हैं?	1	2	3	4	5
25. अपने यातायात के साधन से आप कितने संतुष्ट है?	1	2	3	4	5

निम्नलिखित प्रश्न इस बारे में है कि पिछले दो सप्ताहों में आपने कुछ चीजों को कितनी बार महसूस किया है

	कभी नहीं	कभी–कभी	अक्सर	बहुत अधिक बार	हमेशा
26. कितनी बार आप नकरात्मक भावनाएँ (जैसे दुःखी मन, निराशा, घबराहट, उदासी) महसूस करते हैं?	1	2	3	4	5

क्या इस प्रश्नावनी को भरनें मे किसी ने आपकी मदद की? .....

इस प्रश्नावनी को भरने में कितना समय लगा? .....

इस प्रश्नावली के बारे मे आपकी कोई टिप्पणी .....

आपके सहयोग के लिए धन्यवाद !

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ANNEXURE VIII – DASS 42 (ENGLISH VERSION)

DASS

Name: *Date:*

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1	I found myself getting upset by quite trivial things	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I just couldn't seem to get going	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I had a feeling of shakiness (eg, legs going to give way)	0	1	2	3
8	I found it difficult to relax	0	1	2	3
9	I found myself in situations that made me so anxious I was most relieved when they ended	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting upset rather easily	0	1	2	3
12	I felt that I was using a lot of nervous energy	0	1	2	3
13	I felt sad and depressed	0	1	2	3
14	I found myself getting impatient when I was delayed in any way (eg, elevators, traffic lights, being kept waiting)	0	1	2	3
15	I had a feeling of faintness	0	1	2	3
16	I felt that I had lost interest in just about everything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life wasn't worthwhile	0	1	2	3

Please turn the page ☞

Reminder of rating scale:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

22	I found it hard to wind down	0	1	2	3
23	I had difficulty in swallowing	0	1	2	3
24	I couldn't seem to get any enjoyment out of the things I did	0	1	2	3
25	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
26	I felt down-hearted and blue	0	1	2	3
27	I found that I was very irritable	0	1	2	3
28	I felt I was close to panic	0	1	2	3
29	I found it hard to calm down after something upset me	0	1	2	3
30	I feared that I would be "thrown" by some trivial but unfamiliar task	0	1	2	3
31	I was unable to become enthusiastic about anything	0	1	2	3
32	I found it difficult to tolerate interruptions to what I was doing	0	1	2	3
33	I was in a state of nervous tension	0	1	2	3
34	I felt I was pretty worthless	0	1	2	3
35	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
36	I felt terrified	0	1	2	3
37	I could see nothing in the future to be hopeful about	0	1	2	3
38	I felt that life was meaningless	0	1	2	3
39	I found myself getting agitated	0	1	2	3
40	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
41	I experienced trembling (eg, in the hands)	0	1	2	3
42	I found it difficult to work up the initiative to do things	0	1	2	3

ANNEXURE IX – DASS 42 (HINDI VERSION)

अवसाद, चिंता एवं तनाव मापनी

कृपया प्रत्येक कथन को ध्यान पूर्वक पढ़े । पिछले एक सप्ताह मे यह कथन आपके ऊपर किस हद तक लागू होते हैं इसका निर्धारण उनके सामने बने, खाली स्थानों में से सबसे उपयुक्त मे सही का चिन्ह लगाकर करें । प्रश्नों का कोई सही या गलत उत्तर नहीं हैं यह केवल आपके पिछले अनुभव जानने के लिए है कृपया उत्तर देने मे जयादा समय न लगायें ।

बिलकुल नहीं = ० कुछ हद तक = १ काफी ज्यादा = २ पूरी तरह से = ३

क्र.	कथन	०	१	२	३
१	मैं तुच्छःप्राय बातों से भी परेशान हो जाता था ।				
२	मुझे पता है कि मेरा मुँह सूख जाता था।				
३	मैं कोई सकारात्मक भाव अनुभव नहीं कर सका।				
४	मैंने साँस लेने में तकलीफ महसूस की (जैसे कि सामान्य से तेज साँस लेना, शारीरिक श्रम के बिना भी साँस का फूलना महसूस किया)।				
५	मेरा कुछ भी करने का मन नहीं हुआ।				
६	मैंने परिस्थितियों को जरुरत से ज्यादा प्रतिक्रिया दी।				
७	मैंने लड़खड़ाना अनुभव किया (जैसे, पैर कही और जा रहे थे)।				
८	मैंने विश्राम करना मुश्किल पाया।				
९	कभी कभी मैं ऐसी परिस्थिति में होता था जो मुझे काफी चिंतित कर देती थी, और मैं उनके खत्म होने पर ही राहत महसूस करता था।				
१०	मैंने अपने आपको ग्लानित/ दोषी महसूस किया ।				
११	मैंने देखा कि आराम से रहने के बजाय मैं बहुत आसानी से परेशान हो जाता हूँ।				
१२	मैंने ऐसा महसूस किया कि मैं कई बार कुछ ज्यादा ही घबरा जाता हूँ ।				
१३	मैंने अपने आपको उदास और दुखी महसूस किया ।				
१४	जब मुझे किसी वजह से देर होती थी, मैं बहुत बेचैन हो जाता था (जैसे कि लिफ्ट में, यातायात चिन्ह का बहुत देर तक इंतज़ार करने में)।				
१५	मैंने अपने आपको शक्तिहीन महसूस किया ।				
१६	मैंने महसूस किया कि मेरी दिलचस्पी / रूचि लगभग हर चीज से खत्म हो गयी थी ।				
१७	मैंने महसूस किया कि मैं ज्यादा योग्य व्यक्ति नहीं था।				
१८	मैंने महसूस किया कि मैं ज्यादा भावुक हो गया था।				
१९	बिना किसी उच्च तापमान / गर्मी या शारीरिक थकावट के, मैं पसीने से लथपथ हो जाता था।				
२०	मैंने बिना किसी कारण के डर महसूस किया ।				
२१	मैंने महसूस किया कि जीवन बेकार है।				

क्र.	कथन	०	१	२	३
२२	धीरे धीरे कार्य क्षमता में क्षीणता / कमी ने मुझे परेशान किया था।				
२३	मुझे निगलने में कठिनाई हुई थी ।				
२४	मैंने जो कुछ भी किया उसका आनंद नहीं उठा सका ।				
२५	शारीरिक परिश्रम के बिना भी मैं अपने दिल की धड़कनों को महसूस करता था (जैसे- तेज गति से धड़कना या कभी रुक जाना)।				
२६	मैंने अपने आपको दुखी और हीन महसूस किया।				
२७	मैंने महसूस किया की मैं बहुत चिड़चिड़ा हो गया था।				
२८	मैंने आतंकित महसूस किया था।				
२९	जब कोई चीज मुझे बहुत परेशान कर देती थी तो मैंने अपने आपको शांत कर पाना काफी मुश्किल पाया।				
३०	मैं सोचता था कि मैं नए और अनजान कार्यों को मैं नहीं कर पाउँगा चाहे वो साधारण ही क्यों न हों।				
३१	किसी भी कार्य को करने के लिए मैं अपने आपको उत्साहित कर पाने में असमर्थ पता था।				
३२	जब मेरे किसी कार्य में रुकावट आती थी, मैं यह बर्दाश्त नहीं कर पाता था।				
३३	मैं घबरा जाने वाली चिंतित अवस्था में था।				
३४	मैंने महसूस किया कि मैं बहुत बेकार था।				
३५	किसी विशेष उपक्रम या व्यवस्था द्वारा मेरे कार्यो पर नजर रखी जाये यह मुझे बर्दाश्त नहीं है।				
३६	मैं बहुत डर गया था।				
३७	मैंने पाया कि मेरे भविष्य में कुछ भी आशान्वित नहीं था।				
३८	मुझे लगा कि जीवन सार्थक नहीं था।				
३९	मैंने अपने आपको बहुत घबराया हुआ महसूस किया।				
४०	मैं उस परिस्थिति के बारे में बहुत चिंतित था, जिसमे मैं बहुत बेचैन हो गया था और मैंने बेवकूफी की।				
४१	मैंने कम्पन महसूस किया (जैसे- हांथो में)।				
४२	किसी भी कार्य की शुरुआत करने में मुझे दिक्कत होती है।				

LETTER OF ETHICAL CLEARANCE

SANTOSH
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F. No. SU/2025/CRF/289 Dated: 25.05.2025

Subject: Approval of Research Project by the Institutional Human Ethics Committee.

Particular	Description
Project No.	EC/ M.Sc. Clinical Psychology./289
Project Title	Gender difference in depression, anxiety, stress and quality of life among paramedical students
Student Name	Nayangben Lkr
Guide	Ms Swati
Department	M.Sc. Clinical Psychology
Institution Name	Santosh Medical College & Hospital, Ghaziabad
Type of Study	Cross-sectional study
Ethics committee decision	Approved

This Ethical clearance letter valid for 2 years from the date of issue.

Jyoti Batra

Dr. Jyoti Batra
Member Secretary

Santosh Deemed to be University
Dean Research

To,
Nayangben Lkr
M.Sc. Clinical Psychology

STATISTICIAN CERTIFICATE

SANTOSH
Deemed to be University

STATISTICIAN CERTIFICATE

This is to certify that the statistical analysis component of the thesis titled **"Gender Differences in Depression, Anxiety, Stress and Quality of Life among Paramedical Students "**, done by **Nayangben Lkr** in the **Department of Clinical Psychology**, Santosh Medical College and Hospital, Ghaziabad, has been conducted under my direct guidance and supervision.

All the statistical calculations of this study are authentic and correct to the best of my knowledge.

Wish her all the success in her life.

Dr. Vikash Singh Patel
Assistant Professor cum Statistician
Department of Community Medicine
Santosh Deemed To be University, Ghaziabad
Email: pvikash885@gmail.com

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1	B	19	F	Unmarried	SMCH	B.P.T	22	15	10	19	56
2	K.S	19	F	Unmarried	SMCH	B.P.T	13	18	16	19	68
3	L.R	19	F	Unmarried	SMCH	B.P.T	9	5	2	12	79
4	B.G	19	F	Unmarried	SMCH	B.P.T	26	22	24	32	40
5	P	18	F	Unmarried	SMCH	B.P.T	14	8	6	9	77
6	S.S	18	F	Unmarried	SMCH	B.P.T	14	24	26	11	58
7	A.C	20	F	Unmarried	SMCH	B.P.T	14	4	12	10	78
8	S	20	F	Unmarried	SMCH	B.P.T	23	16	18	8	51
9	K.R	20	F	Unmarried	SMCH	B.P.T	6	6	14	15	73
10	V.S	20	F	Unmarried	SMCH	B.P.T	24	30	20	25	37
11	N	20	F	Unmarried	SMCH	B.P.T	7	5	17	20	49
12	R.A	22	F	Unmarried	SMCH	B.OPTOMETRY	12	7	4	7	81
13	P.S	23	F	Unmarried	SMCH	B.OPTOMETRY	16	24	18	24	57
14	P. SINGH	21	F	Unmarried	SMCH	B.OPTOMETRY	15	20	22	26	60
15	S	23	F	Unmarried	SMCH	B.OPTOMETRY	19	18	19	22	58
16	P.G	22	F	Unmarried	SMCH	B.OPTOMETRY	19	18	23	23	60
17	P.R	22	F	Unmarried	SMCH	B.OPTOMETRY	12	27	32	20	48
18	H	20	F	Unmarried	SMCH	B.Sc. Nursing	4	2	1	2	69
19	M	19	F	Unmarried	SMCH	B.Sc. Nursing	8	10	4	12	68
20	B	20	F	Unmarried	SMCH	B.Sc. Nursing	8	6	9	4	51
21	B	19	F	Unmarried	SMCH	B.Sc. Nursing	7	5	3	12	56
22	P.P	19	F	Unmarried	SMCH	B.Sc. Nursing	3	1	7	4	66
23	R.P	21	F	Unmarried	SMCH	B.Sc. Nursing	5	4	3	6	65
24	P.S	18	F	Unmarried	SMCH	B.Sc. Nursing	12	12	2	11	59
25	N.B	18	F	Unmarried	SMCH	G.N.M	6	4	7	8	59
26	S.Y	20	F	Unmarried	SMCH	G.N.M	12	16	19	18	57
27	S.YADAV	20	F	Unmarried	SMCH	G.N.M	20	16	10	20	49
28	S.M	20	F	Unmarried	SMCH	G.N.M	7	8	6	17	59
29	P	23	F	Unmarried	SMCH	G.N.M	15	12	5	13	72
30	M	20	F	Unmarried	SMCH	G.N.M	7	11	16	22	60
31	S	18	F	Unmarried	SMCH	G.N.M	12	8	8	13	61
32	K	20	F	Unmarried	SMCH	G.N.M	17	17	20	22	51
33	K.S	20	F	Unmarried	SMCH	G.N.M	7	7	10	13	53
34	N.K	22	F	Unmarried	SMCH	G.N.M	11	7	11	12	66
35	I	22	F	Unmarried	SMCH	G.N.M	10	5	11	20	62
36	S	25	F	Unmarried	SMCH	G.N.M	8	6	4	7	63
37	S.A	19	F	Unmarried	SMCH	G.N.M	10	2	10	19	60
38	N.Y	19	F	Unmarried	SMCH	G.N.M	10	7	13	14	66
39	N	21	F	Unmarried	SMCH	G.N.M	14	22	16	21	22
40	Y	22	F	Unmarried	SMCH	G.N.M	16	1	7	11	57
41	M	23	F	Unmarried	SMCH	G.N.M	18	16	13	20	46
42	V.S	18	F	Unmarried	SMCH	G.N.M	22	24	21	31	31
43	S	20	F	Unmarried	SMCH	G.N.M	8	11	16	23	43
44	A.K	21	F	Unmarried	SMCH	G.N.M	6	7	14	8	67
45	D	25	F	Unmarried	SMCH	G.N.M	16	17	9	20	45
46	I.A	22	F	Unmarried	SMCH	G.N.M	13	14	12	34	61
47	A.K	19	F	Unmarried	SMCH	G.N.M	13	15	11	23	58
48	V.T	19	F	Unmarried	SMCH	G.N.M	12	12	11	24	66
49	I	19	F	Unmarried	SMCH	G.N.M	22	23	16	22	37
50	L	25	F	Unmarried	SMCH	G.N.M	12	4	7	16	67
51	M	19	F	Unmarried	SMCH	G.N.M	11	7	6	13	58
52	K	19	F	Unmarried	SMCH	G.N.M	25	17	16	25	55
53	K.C	19	F	Unmarried	SMCH	G.N.M	22	22	7	28	42
54	A	19	F	Unmarried	SMCH	G.N.M	15	15	11	27	59
55	R	19	F	Unmarried	SMCH	G.N.M	15	19	17	23	60
56	Y	18	F	Unmarried	SMCH	G.N.M	12	22	16	24	40
57	V	20	F	Unmarried	SMCH	G.N.M	8	12	6	22	65
58	J.K	18	F	Unmarried	SMCH	G.N.M	6	9	11	17	58
59	M.B	20	F	Unmarried	SMCH	G.N.M	21	15	17	23	43
60	A.K	23	F	Unmarried	SMCH	G.N.M	11	12	8	12	67
61	Z	24	F	Unmarried	SMCH	G.N.M	7	8	9	13	61

62	S	18	F	Unmarried	SMCH	G.N.M	7	8	11	20	60
63	M.P	20	F	Unmarried	SMCH	G.N.M	6	15	13	27	37
64	K.K	18	F	Unmarried	SMCH	G.N.M	10	15	13	23	60
65	N	19	F	Unmarried	SMCH	G.N.M	13	22	16	24	51
66	V.K	23	F	Unmarried	SMCH	G.N.M	6	15	11	28	62
67	E	18	F	Unmarried	SMCH	B.O.T	10	3	10	18	57
68	P.P	18	F	Unmarried	SMCH	B.O.T	6	24	19	29	40
69	H.K	19	F	Unmarried	SMCH	B.O.T	13	12	11	22	67
70	P	20	F	Unmarried	SMCH	B.O.T	12	39	33	36	42
71	A.C	21	F	Unmarried	SMCH	B.O.T	26	29	32	28	38
72	M.P	18	F	Unmarried	SMCH	B.O.T	6	20	16	20	54
73	S	20	F	Unmarried	SMCH	B.O.T	4	9	7	12	66
74	K.S	19	F	Unmarried	SMCH	B.O.T	17	16	9	18	44
75	P	18	F	Unmarried	SMCH	B.O.T	17	16	10	26	67
76	A.R	19	F	Unmarried	SMCH	B.O.T	9	33	36	27	38
77	J	19	F	Unmarried	SMCH	B.O.T	9	24	25	33	40
78	P.Y	20	F	Unmarried	SMCH	B.O.T	20	29	19	36	55
79	S.S	18	F	Unmarried	SMCH	B.O.T	14	8	10	12	77
80	N.S	19	F	Unmarried	SMCH	B.O.T	12	4	2	6	60
81	J	20	F	Unmarried	SMCH	B.O.T	18	7	9	6	81
82	Y	18	F	Unmarried	SMCH	B.O.T	20	15	14	12	68
83	T	20	F	Unmarried	SMCH	B.O.T	11	11	19	10	66
84	D.K	24	F	Unmarried	SMCH	B.P.T	14	14	16	10	55
85	A	23	F	Unmarried	SMCH	B.P.T	12	2	8	12	69
86	M	25	F	Unmarried	SMCH	B.P.T	11	4	10	12	77
87	G	23	F	Unmarried	SMCH	B.P.T	13	12	9	17	40
88	B.S	24	F	Unmarried	SMCH	B.P.T	12	12	4	8	58
89	V.B	23	F	Unmarried	SMCH	B.Sc. Nursing	11	15	16	22	60
90	S.R	24	F	Unmarried	SMCH	B.Sc. Nursing	22	22	17	37	44
91	M.G	23	F	Unmarried	SMCH	B.Sc. Nursing	12	9	7	12	61
92	A.S	25	F	Unmarried	SMCH	B.Sc. Nursing	16	15	11	25	58
93	P.C	25	F	Unmarried	SMCH	B.Sc. Nursing	8	23	21	17	40
94	A.S	24	F	Unmarried	SMCH	B.Sc. Nursing	11	13	8	33	66
95	A	24	F	Unmarried	SMCH	B.Sc. Nursing	13	9	14	22	58
96	A.S	23	F	Unmarried	SMCH	B.Sc. Nursing	15	17	16	20	51
97	A.P	25	F	Unmarried	SMCH	B.Sc. Nursing	19	12	10	23	71
98	S	22	F	Unmarried	SMCH	G.N.M	12	8	5	13	66
99	A.T	21	F	Unmarried	SMCH	G.N.M	11	13	10	22	50
100	N.S	19	F	Unmarried	SMCH	G.N.M	21	22	16	23	44
101	T	20	F	Unmarried	SMCH	G.N.M	13	12	10	14	69
102	N.K	18	F	Unmarried	SMCH	G.N.M	17	26	13	20	53
103	A	20	F	Unmarried	SMCH	G.N.M	9	8	10	17	71
104	J.R	21	F	Unmarried	SMCH	G.N.M	11	10	16	27	40
105	T.M	22	F	Unmarried	SMCH	G.N.M	20	25	13	29	32
106	V.B	19	F	Unmarried	SMCH	G.N.M	7	8	3	12	55
107	S.Y	19	F	Unmarried	SMCH	B.OPTOMETRY	9	15	11	36	58
108	M.A	18	F	Unmarried	SMCH	B.OPTOMETRY	13	12	6	14	77
109	A.R	19	F	Unmarried	SMCH	B.OPTOMETRY	21	23	17	21	41
110	S.K	22	M	Unmarried	SMCH	B.OPTOMETRY	19	19	24	29	50
111	S	23	M	Unmarried	SMCH	B.OPTOMETRY	13	20	16	16	40
112	T.P	25	M	Unmarried	SMCH	B.OPTOMETRY	16	18	20	14	44
113	G.K	24	M	Unmarried	SMCH	B.OPTOMETRY	12	8	10	16	54
114	R	25	M	Unmarried	SMCH	B.OPTOMETRY	22	8	14	18	57
115	Y.D	21	M	Unmarried	SMCH	B.OPTOMETRY	25	19	25	25	49
116	A.K	21	M	Unmarried	SMCH	B.OPTOMETRY	20	18	24	17	51
117	A.C	21	M	Unmarried	SMCH	B.OPTOMETRY	18	24	17	21	40
118	V.K	23	M	Unmarried	SMCH	B.OPTOMETRY	6	8	11	11	61

119	A.A	21	M	Unmarried	SMCH	B.Sc. Nursing	5	2	10	13	63
120	H.B	18	M	Unmarried	SMCH	B.Sc. Nursing	9	26	27	35	39
121	T.K	23	M	Unmarried	SMCH	B.Sc. Nursing	13	19	17	19	58
122	D	23	M	Unmarried	SMCH	B.Sc. Nursing	12	4	5	8	66
123	N.K	24	M	Unmarried	SMCH	B.Sc. Nursing	13	2	7	11	52
124	N.N	24	M	Unmarried	SMCH	B.Sc. Nursing	12	1	4	9	55
125	S	24	M	Unmarried	SMCH	B.Sc. Nursing	13	0	5	8	57
126	N	24	M	Unmarried	SMCH	B.Sc. Nursing	12	1	3	10	65
127	R	25	M	Unmarried	SMCH	B.P.T	14	9	18	15	59
128	N.S	21	M	Unmarried	SMCH	B.P.T	9	13	14	27	56
129	I.K	19	M	Unmarried	SMCH	B.P.T	6	3	4	2	57
130	P.K	21	M	Unmarried	SMCH	B.P.T	10	16	11	23	64
131	Y.KS	19	M	Unmarried	SMCH	B.P.T	5	2	11	9	57
132	S.K	19	M	Unmarried	SMCH	B.P.T	24	32	32	28	32
133	A.S	20	M	Unmarried	SMCH	B.P.T	13	14	22	10	44
134	A.C	18	M	Unmarried	SMCH	B.P.T	8	4	11	11	52
135	P.S	18	M	Unmarried	SMCH	B.P.T	3	4	6	8	67
136	H.R	21	M	Unmarried	SMCH	B.P.T	18	4	10	3	55
137	A.M	21	M	Unmarried	SMCH	B.P.T	10	12	8	14	64
138	J.F	19	M	Unmarried	SMCH	B.P.T	25	22	25	27	40
139	M	20	M	Unmarried	SMCH	B.P.T	13	12	13	23	56
140	M.SS	18	M	Unmarried	SMCH	B.P.T	26	25	22	27	41
141	Y.S	18	M	Unmarried	SMCH	B.P.T	11	4	6	13	57
142	A.C	20	M	Unmarried	SMCH	B.P.T	8	12	13	11	61
143	H.KS	23	M	Unmarried	SMCH	B.P.T	6	7	4	10	57
144	Z.A	21	M	Unmarried	SMCH	B.P.T	2	5	4	13	67
145	N.P	24	M	Unmarried	SMCH	B.P.T	7	11	12	17	57
146	A	20	M	Unmarried	SMCH	B.P.T	10	12	7	17	54
147	S	24	M	Unmarried	SMCH	B.P.T	8	11	9	20	55
148	M.SS	20	M	Unmarried	SMCH	B.P.T	9	14	9	16	40
149	R.S	20	M	Unmarried	SMCH	B.P.T	4	21	16	20	44
150	Y. PS	18	M	Unmarried	SMCH	B.P.T	4	3	0	2	55
151	A.D	19	M	Unmarried	SMCH	B.P.T	6	0	9	10	47
152	V.K	19	M	Unmarried	SMCH	B.P.T	5	2	0	3	63
153	B.A	19	M	Unmarried	SMCH	B.P.T	9	10	10	15	46
154	A.S	20	M	Unmarried	SMCH	B.P.T	8	13	9	14	61
155	A.A	21	M	Unmarried	SMCH	B.P.T	13	11	10	10	51
156	S.P	18	M	Unmarried	SMCH	B.P.T	13	7	8	11	51
157	A.K	19	M	Unmarried	SMCH	G.N.M	15	5	6	4	62
158	V.K	20	M	Unmarried	SMCH	G.N.M	4	6	1	4	59
159	S.A	20	M	Unmarried	SMCH	G.N.M	9	4	10	10	57
160	A	21	M	Unmarried	SMCH	G.N.M	18	5	10	13	61
161	R	24	M	Unmarried	SMCH	G.N.M	11	0	0	2	44
162	H.S	20	M	Unmarried	SMCH	G.N.M	6	2	4	2	63
163	S. KR	20	M	Unmarried	SMCH	B.O.T	19	8	1	4	57
164	S.K	21	M	Unmarried	SMCH	B.O.T	16	9	8	1	68
165	A.K	25	M	Unmarried	SMCH	B.O.T	15	8	9	6	63
166	N.S	18	M	Unmarried	SMCH	B.O.T	5	12	2	3	55
167	V.K	19	M	Unmarried	SMCH	B.O.T	10	20	25	17	59
168	S	19	M	Unmarried	SMCH	B.O.T	15	21	33	23	40
169	R.K	21	M	Unmarried	SMCH	B.O.T	23	22	31	30	32
170	H.K	20	M	Unmarried	SMCH	B.O.T	19	23	27	18	40
171	A.S	18	M	Unmarried	SMCH	B.O.T	5	19	23	19	58
172	H	18	M	Unmarried	SMCH	B.O.T	8	20	20	22	55
173	R.S	25	M	Unmarried	SMCH	B.P.T	20	23	21	27	33
174	S.G	20	M	Unmarried	SMCH	B.P.T	11	11	13	20	47
175	C	19	M	Unmarried	SMCH	B.P.T	14	22	13	23	56

176	A	18	M	Unmarried	SMCH	B.P.T	15	15	11	34	60
177	O.M	20	M	Unmarried	SMCH	B.P.T	10	12	9	17	55
178	S.G	18	M	Unmarried	SMCH	B.P.T	5	12	13	17	60
179	S.J	19	M	Unmarried	SMCH	B.P.T	14	20	15	22	65
180	S.V	21	M	Unmarried	SMCH	B.P.T	11	11	8	17	42
181	M.S	20	M	Unmarried	SMCH	B.P.T	7	7	6	12	77
182	S.A	18	M	Unmarried	SMCH	B.P.T	12	12	9	17	71
183	A.P	19	M	Unmarried	SMCH	B.P.T	1	5	3	11	64
184	S.T	22	M	Unmarried	SMCH	B.P.T	13	19	13	22	40
185	M.C	20	M	Unmarried	SMCH	B.P.T	15	11	13	12	58
186	D.S	18	M	Unmarried	SMCH	B.P.T	7	8	10	16	57
187	R.S	22	M	Unmarried	SMCH	B.P.T	12	20	16	27	41
188	S.C	23	M	Unmarried	SMCH	B.P.T	13	21	12	20	60
189	N	21	M	Unmarried	SMCH	B.P.T	12	11	9	12	55
190	N.Y	18	M	Unmarried	SMCH	B.P.T	26	22	16	29	40
191	K	22	M	Unmarried	SMCH	B.OPTOMETRY	15	15	11	22	57
192	D.H	21	M	Unmarried	SMCH	B.OPTOMETRY	12	8	7	12	66
193	I.H	19	M	Unmarried	SMCH	B.OPTOMETRY	13	22	14	22	60
194	M.R	20	M	Unmarried	SMCH	B.OPTOMETRY	22	19	26	17	41
195	B.L	22	M	Unmarried	SMCH	B.OPTOMETRY	11	7	6	12	66
196	A.I	20	M	Unmarried	SMCH	B.OPTOMETRY	6	3	5	10	56
197	S.R	21	M	Unmarried	SMCH	B.O.T	12	12	11	13	81
198	A.T	19	M	Unmarried	SMCH	B.O.T	11	15	12	22	77
199	S.R	18	M	Unmarried	SMCH	B.O.T	7	3	5	13	77
200	M	18	M	Unmarried	SMCH	B.O.T	19	22	16	25	59
201	H	20	M	Unmarried	SMCH	B.O.T	16	15	9	33	50
202	N.R	21	M	Unmarried	SMCH	B.O.T	25	25	24	32	40
203	A.H	22	M	Unmarried	SMCH	B.O.T	24	13	16	25	51
204	H.A	21	M	Unmarried	SMCH	B.O.T	21	19	13	12	44
205	P.G	23	M	Unmarried	SMCH	B.O.T	11	22	14	12	55
206	L.D	21	M	Unmarried	SMCH	B.O.T	14	16	11	12	67
207	L.K	20	M	Unmarried	SMCH	B.O.T	23	12	5	17	58
208	R	19	M	Unmarried	SMCH	G.N.M	12	4	7	10	62
209	A.Y	19	M	Unmarried	SMCH	G.N.M	8	9	5	13	51
210	A.L	20	M	Unmarried	SMCH	G.N.M	6	20	9	25	55
211	A.B	22	M	Unmarried	SMCH	G.N.M	26	28	24	25	40
212	A.S	21	M	Unmarried	SMCH	G.N.M	17	11	8	14	59
213	A.P	22	M	Unmarried	SMCH	B.Sc. Nursing	13	13	17	22	49
214	A.T	21	M	Unmarried	SMCH	B.Sc. Nursing	10	5	7	12	66
215	S.S	24	M	Unmarried	SMCH	B.Sc. Nursing	27	25	23	23	45
216	A. TD	24	M	Unmarried	SMCH	B.Sc. Nursing	12	3	0	4	56
217	S.P	25	M	Unmarried	SMCH	B.Sc. Nursing	11	20	14	21	60
218	A.Y	23	M	Unmarried	SMCH	B.Sc. Nursing	8	12	13	33	55